

Supplementary Table 2a: List of genes with at least one protein truncating mutation in 412 HGSOC cases from TCGA

gene	splice_ site	nonsense	stoploss	frameshift	total	total2
A1BG	0	0	0	2	2	2
A2M	0	0	0	1	1	1
A2ML1	1	0	0	1	2	1
A4GALT	0	0	0	2	2	2
A4GNT	0	2	0	0	2	2
AACS	0	1	0	1	2	2
AADAC	0	0	5	1	6	1
AADACL2	0	1	0	0	1	1
AADACL3	0	0	0	16	16	16
AAGAB	0	1	0	0	1	1
AAK1	0	1	0	0	1	1
AAMP	0	0	0	1	1	1
AARS2	0	0	0	3	3	3
AARSD1	0	1	0	0	1	1
AASDH	0	0	0	4	4	4
AATF	1	0	0	0	1	0
ABCA10	0	10	0	26	36	36
ABCA13	2	20	36	2	60	22
ABCA4	0	0	0	1	1	1
ABCA5	0	1	0	0	1	1
ABCA6	0	0	0	2	2	2
ABCA8	0	2	0	1	3	3
ABCA9	5	2	0	1	8	3
ABCB10	0	1	0	2	3	3
ABCB11	0	0	0	3	3	3
ABCB5	12	2	0	0	14	2
ABCB6	0	0	0	1	1	1
ABCB7	13	0	0	0	13	0
ABCB9	0	0	0	1	1	1
ABCC1	1	4	0	1	6	5
ABCC10	0	0	0	5	5	5
ABCC11	7	3	0	0	10	3
ABCC12	0	15	0	10	25	25
ABCC2	0	2	0	0	2	2
ABCC4	0	0	0	1	1	1
ABCC5	0	1	0	5	6	6
ABCC6	0	1	0	0	1	1
ABCC9	2	0	0	0	2	0
ABCD3	0	0	0	1	1	1
ABCE1	0	0	0	3	3	3
ABCF1	0	3	0	0	3	3

ABCF3	1	0	0	2	3	2
ABCG2	0	2	0	0	2	2
ABCG4	0	0	0	1	1	1
ABCG8	0	2	0	0	2	2
ABHD12	0	1	0	0	1	1
ABHD12B	3	1	0	1	5	2
ABHD14B	0	1	0	3	4	4
ABHD2	0	0	0	1	1	1
ABHD3	1	0	0	1	2	1
ABLIM1	1	0	0	0	1	0
ABO	0	0	0	3	3	3
ABP1	0	0	0	1	1	1
ABTB1	0	1	0	0	1	1
ABTB2	0	1	0	1	2	2
ACACA	0	1	0	1	2	2
ACACB	0	1	0	5	6	6
ACAD10	0	1	0	1	2	2
ACAD11	10	9	0	5	24	14
ACAD9	0	0	0	1	1	1
ACADM	0	0	0	1	1	1
ACADVL	1	0	0	0	1	0
ACAN	0	0	0	3	3	3
ACBD4	0	1	0	0	1	1
ACCN1	0	1	0	0	1	1
ACCN2	0	8	0	0	8	8
ACCN3	0	2	0	0	2	2
ACE	0	0	0	1	1	1
ACIN1	0	0	0	11	11	11
ACLY	2	0	0	1	3	1
ACOT1	0	0	0	1	1	1
ACOT12	0	1	0	0	1	1
ACOT13	1	0	0	0	1	0
ACOT2	0	0	0	1	1	1
ACOT4	0	0	0	8	8	8
ACOT6	0	0	0	3	3	3
ACOT8	0	0	0	4	4	4
ACOX2	0	0	0	1	1	1
ACOX3	0	1	0	0	1	1
ACOXL	0	3	0	0	3	3
ACP6	0	0	0	1	1	1
ACPL2	0	0	0	4	4	4
ACPP	0	0	0	2	2	2
ACSBG1	0	0	0	1	1	1
ACSBG2	3	0	0	2	5	2
ACSF3	0	1	0	0	1	1

ACSL5	1	0	0	0	1	0
ACSL6	0	0	0	1	1	1
ACSM2A	0	16	0	0	16	16
ACSM3	0	7	0	0	7	7
ACSM4	1	3	0	1	5	4
ACSM5	0	0	0	1	1	1
ACSS2	0	0	0	11	11	11
ACTA2	0	0	0	1	1	1
ACTL6A	0	0	0	1	1	1
ACTL7B	0	0	0	1	1	1
ACTL9	0	0	0	2	2	2
ACTN1	0	6	0	0	6	6
ACTN3	0	1	0	0	1	1
ACTR1B	0	1	0	0	1	1
ACTR3C	0	4	0	0	4	4
ACTR8	0	1	0	1	2	2
ACTRT1	0	0	0	4	4	4
ACVRL1	0	0	0	2	2	2
ADA	0	0	0	3	3	3
ADAD1	1	0	0	0	1	0
ADAM18	0	1	0	1	2	2
ADAM19	0	1	0	2	3	3
ADAM2	7	0	0	0	7	0
ADAM20	0	0	0	1	1	1
ADAM21	0	0	0	1	1	1
ADAM22	0	0	0	1	1	1
ADAM28	0	0	0	19	19	19
ADAM29	0	1	3	0	4	1
ADAM30	0	0	0	2	2	2
ADAM33	0	0	0	1	1	1
ADAM7	0	0	0	2	2	2
ADAM8	0	0	0	8	8	8
ADAM9	0	1	0	0	1	1
ADAMDEC1	0	0	0	1	1	1
ADAMTS12	1	0	0	0	1	0
ADAMTS15	0	2	0	0	2	2
ADAMTS16	0	1	0	0	1	1
ADAMTS18	0	0	0	1	1	1
ADAMTS20	1	0	0	0	1	0
ADAMTS4	0	1	0	0	1	1
ADAMTS7	0	2	0	0	2	2
ADAMTS9	1	0	0	0	1	0
ADAMTSL1	0	0	0	8	8	8
ADAMTSL3	0	0	1	3	4	3
ADAMTSL4	0	0	0	4	4	4

ADAP1	0	1	0	0	1	1
ADAP2	1	0	0	0	1	0
ADARB1	0	0	0	1	1	1
ADAT2	0	0	0	1	1	1
ADCK2	1	0	0	0	1	0
ADCY10	0	0	0	1	1	1
ADCY2	0	0	0	1	1	1
ADCY5	0	0	0	1	1	1
ADCY7	0	0	0	2	2	2
ADD3	0	1	0	1	2	2
ADH1A	1	0	0	0	1	0
ADH5	0	0	0	1	1	1
ADI1	0	4	0	0	4	4
ADNP2	0	0	0	1	1	1
ADPRH	0	1	0	0	1	1
ADPRHL1	0	0	0	1	1	1
ADRB3	1	0	0	0	1	0
ADRBK1	0	0	0	1	1	1
ADRBK2	0	1	0	0	1	1
ADSSL1	0	0	0	1	1	1
AFAP1L1	0	1	0	0	1	1
AFAP1L2	0	0	0	2	2	2
AFM	0	0	0	1	1	1
AFMID	1	0	0	0	1	0
AGAP2	0	2	0	0	2	2
AGAP5	0	3	0	0	3	3
AGAP6	0	3	0	17	20	20
AGBL1	5	1	0	0	6	1
AGBL2	0	0	0	1	1	1
AGER	0	1	0	0	1	1
AGL	1	0	0	0	1	0
AGMAT	1	0	0	0	1	0
AGMO	0	0	0	2	2	2
AGPAT3	0	0	0	1	1	1
AGPAT4	0	6	0	0	6	6
AGPAT6	0	0	4	3	7	3
AGPAT9	0	1	0	0	1	1
AGPHD1	0	4	0	0	4	4
AGR2	0	1	0	0	1	1
AGR3	1	0	0	0	1	0
AGRP	0	0	0	1	1	1
AGTPBP1	0	0	0	2	2	2
AGTR2	0	0	0	1	1	1
AGXT2	2	0	0	0	2	0
AHCTF1	6	0	0	0	6	0

AHDC1	0	0	0	1	1	1
AHI1	0	5	0	0	5	5
AHNAK2	0	1	0	10	11	11
AHR	0	0	0	1	1	1
AHSA1	0	0	1	0	1	0
AHSA2	0	1	0	1	2	2
AHSG	0	1	0	0	1	1
AHSP	0	0	0	1	1	1
AIFM3	0	0	0	1	1	1
AIM1	0	0	0	2	2	2
AIM2	0	0	2	12	14	12
AIMP1	0	0	0	1	1	1
AIP	0	0	0	2	2	2
AIPL1	1	0	0	0	1	0
AK7	0	3	0	0	3	3
AK8	0	0	0	1	1	1
AKAP10	0	0	0	1	1	1
AKAP13	0	2	0	0	2	2
AKAP3	0	0	0	8	8	8
AKAP7	1	0	0	0	1	0
AKAP8	3	0	0	0	3	0
AKD1	0	2	0	0	2	2
AKIRIN2	0	0	0	1	1	1
AKNA	1	0	0	1	2	1
AKNAD1	2	0	0	0	2	0
AKR1B10	0	0	0	1	1	1
AKR1C3	0	1	0	0	1	1
AKR7A2	0	1	0	0	1	1
AKT1	0	7	0	0	7	7
AKT3	1	0	0	0	1	0
ALAS1	0	0	0	8	8	8
ALDH18A1	0	1	0	1	2	2
ALDH1B1	0	1	0	8	9	9
ALDH1L1	1	0	0	0	1	0
ALDH1L2	0	2	0	0	2	2
ALDH2	0	0	0	3	3	3
ALDH3A2	0	1	0	0	1	1
ALDH4A1	0	0	0	2	2	2
ALDH5A1	1	0	0	1	2	1
ALDH6A1	0	0	0	1	1	1
ALDH9A1	0	1	0	0	1	1
ALDOB	0	2	0	0	2	2
ALDOC	0	0	0	1	1	1
ALG1	0	1	0	0	1	1
ALG10	0	0	0	1	1	1

ALG10B	0	1	0	0	1	1
ALG1L2	0	1	0	0	1	1
ALG8	0	1	0	0	1	1
ALG9	0	0	0	1	1	1
ALK	0	1	0	0	1	1
ALKBH3	0	1	0	2	3	3
ALLC	0	1	0	0	1	1
ALOX12	0	1	0	0	1	1
ALOX15B	0	2	0	1	3	3
ALOXE3	0	1	0	0	1	1
ALPK1	0	1	0	0	1	1
ALPK2	0	2	0	9	11	11
ALPP	0	1	0	1	2	2
ALS2	2	0	0	0	2	0
ALS2CL	0	0	0	1	1	1
ALS2CR11	0	1	0	1	2	2
ALS2CR12	0	1	0	0	1	1
ALS2CR8	0	0	0	4	4	4
AMBN	1	0	0	0	1	0
AMHR2	0	0	0	3	3	3
AMICA1	1	0	0	0	1	0
AMOTL1	1	0	0	0	1	0
AMPD2	1	0	0	0	1	0
AMY2B	1	0	0	0	1	0
AMZ1	0	1	0	0	1	1
AMZ2	0	0	0	2	2	2
ANAPC4	0	1	0	0	1	1
ANGEL2	0	0	0	3	3	3
ANGPT2	0	1	0	0	1	1
ANGPT4	0	0	0	1	1	1
ANGPTL3	1	0	0	1	2	1
ANGPTL4	0	0	0	1	1	1
ANGPTL5	0	1	0	0	1	1
ANGPTL6	0	1	0	0	1	1
ANK1	0	0	0	8	8	8
ANK3	2	1	0	0	3	1
ANKFN1	1	0	0	2	3	2
ANKHD1	0	2	0	0	2	2
ANKLE1	0	0	0	1	1	1
ANKMY2	0	1	0	0	1	1
ANKRD1	1	0	0	0	1	0
ANKRD16	0	0	0	1	1	1
ANKRD18B	0	1	0	0	1	1
ANKRD20A4	0	0	0	12	12	12
ANKRD22	1	0	0	0	1	0

ANKRD23	0	0	0	1	1	1
ANKRD24	0	0	0	1	1	1
ANKRD27	0	0	0	1	1	1
ANKRD30A	6	18	0	25	49	43
ANKRD35	0	3	1	1	5	4
ANKRD36	3	0	0	31	34	31
ANKRD36B	1	0	0	4	5	4
ANKRD37	0	0	0	1	1	1
ANKRD6	1	0	0	0	1	0
ANLN	1	1	0	0	2	1
ANO1	0	1	0	0	1	1
ANO10	0	0	0	1	1	1
ANO5	0	1	0	3	4	4
ANO7	0	0	0	9	9	9
ANO8	3	0	0	0	3	0
ANPEP	0	1	0	0	1	1
ANTXR2	0	0	0	14	14	14
ANUBL1	1	0	0	2	3	2
ANXA10	1	4	0	0	5	4
ANXA5	0	1	0	0	1	1
ANXA7	0	1	0	0	1	1
AOAH	0	3	0	1	4	4
AOC2	0	4	0	8	12	12
AOX1	0	3	0	0	3	3
AP1G2	1	0	0	0	1	0
AP1M1	0	0	0	1	1	1
AP1M2	2	0	0	9	11	9
AP1S1	0	0	0	1	1	1
AP2A1	0	0	0	1	1	1
AP2A2	0	0	0	2	2	2
AP2B1	1	0	0	2	3	2
AP2M1	0	0	4	0	4	0
AP3B2	0	0	0	6	6	6
AP3M1	0	20	0	0	20	20
AP3M2	0	0	0	3	3	3
AP3S1	0	0	0	1	1	1
AP4B1	0	0	0	1	1	1
AP4E1	0	0	0	1	1	1
AP4M1	0	1	0	0	1	1
APBA1	0	0	0	1	1	1
APC	0	1	0	2	3	3
APCS	0	0	0	1	1	1
APEX1	0	0	0	3	3	3
APEX2	0	0	0	1	1	1
APIP	0	4	0	0	4	4

APLF	0	0	0	13	13	13
APOA2	9	0	0	0	9	0
APOB	0	5	0	0	5	5
APOBEC1	0	3	0	0	3	3
APOBEC3A	0	0	0	1	1	1
APOBEC3B	1	0	0	2	3	2
APOBEC3G	0	1	0	0	1	1
APOL4	20	0	1	0	21	0
APOL5	0	1	0	4	5	5
APPBP2	0	0	0	1	1	1
APPL1	3	5	0	1	9	6
APTX	7	2	0	0	9	2
AQP10	0	0	0	1	1	1
AQP12A	0	0	0	5	5	5
AQP12B	0	1	0	0	1	1
AQP6	0	0	0	2	2	2
AQP7	0	8	0	2	10	10
AQP9	0	0	0	2	2	2
ARAP1	0	7	0	0	7	7
ARF6	0	0	0	2	2	2
ARHGAP10	1	0	0	3	4	3
ARHGAP15	0	1	0	0	1	1
ARHGAP25	1	0	0	0	1	0
ARHGAP27	0	0	0	1	1	1
ARHGAP29	0	0	0	2	2	2
ARHGAP33	0	0	0	1	1	1
ARHGAP36	0	10	0	0	10	10
ARHGAP40	0	13	0	0	13	13
ARHGAP44	0	0	0	2	2	2
ARHGAP5	0	2	0	8	10	10
ARHGAP8	0	0	0	1	1	1
ARHGAP9	1	0	0	0	1	0
ARHGDIA	0	0	0	1	1	1
ARHGEF15	0	0	0	1	1	1
ARHGEF2	0	3	0	0	3	3
ARHGEF35	0	0	0	2	2	2
ARHGEF37	4	0	0	0	4	0
ARHGEF4	2	0	0	1	3	1
ARHGEF40	1	0	0	0	1	0
ARHGEF5	0	1	0	0	1	1
ARHGEF6	0	0	0	19	19	19
ARID1A	0	0	0	8	8	8
ARID4A	2	0	0	0	2	0
ARL11	0	6	0	0	6	6
ARL13B	0	1	0	0	1	1

ARL6IP1	0	0	0	1	1	1
ARMC3	0	7	0	5	12	12
ARMC5	0	0	0	1	1	1
ARMC6	0	2	0	0	2	2
ARMCX2	0	0	0	2	2	2
ARMCX6	0	0	0	1	1	1
ARMS2	0	0	0	1	1	1
ARNTL2	1	0	0	0	1	0
ARSD	0	0	0	1	1	1
ARSE	0	1	0	0	1	1
ARSJ	0	0	0	1	1	1
ART1	0	1	0	0	1	1
ART3	0	2	0	0	2	2
ART5	0	0	0	2	2	2
ARV1	0	0	0	1	1	1
ASAH1	1	0	0	1	2	1
ASAP2	0	0	0	1	1	1
ASB11	0	5	0	0	5	5
ASB12	0	0	0	1	1	1
ASB15	0	2	0	13	15	15
ASB18	0	0	0	1	1	1
ASB2	0	1	0	0	1	1
ASB6	0	1	0	0	1	1
ASB8	0	0	0	1	1	1
ASCL3	0	3	0	2	5	5
ASCL4	0	0	0	1	1	1
ASH1L	0	0	0	1	1	1
ASPDH	0	0	0	1	1	1
ASPN	0	1	0	0	1	1
ASTE1	0	0	0	1	1	1
ASTL	0	0	0	3	3	3
ASTN1	0	0	0	2	2	2
ASXL1	0	0	0	1	1	1
ATAD5	0	0	0	3	3	3
ATF5	0	1	0	0	1	1
ATF7IP	1	0	0	0	1	0
ATG3	0	0	0	7	7	7
ATG4C	0	0	0	3	3	3
ATG4D	0	1	0	0	1	1
ATG7	0	1	0	1	2	2
ATG9A	0	0	0	2	2	2
ATL1	0	1	0	1	2	2
ATM	1	2	0	0	3	2
ATOH8	0	0	0	2	2	2
ATP10B	1	0	0	0	1	0

ATP10D	0	0	0	4	4	4
ATP11A	0	0	0	3	3	3
ATP12A	1	0	0	1	2	1
ATP13A5	0	6	0	2	8	8
ATP1A4	0	0	0	1	1	1
ATP2B2	1	0	0	0	1	0
ATP2B4	0	1	0	0	1	1
ATP2C1	0	1	0	1	2	2
ATP2C2	7	0	0	0	7	0
ATP4A	0	0	0	2	2	2
ATP5J	0	0	0	3	3	3
ATP5L2	0	0	0	1	1	1
ATP5O	0	0	0	1	1	1
ATP6V0A2	0	1	0	0	1	1
ATP6V0D1	0	0	0	3	3	3
ATP6V1C2	1	0	0	0	1	0
ATP6V1G3	0	5	0	0	5	5
ATP6V1H	0	0	0	1	1	1
ATP7B	0	0	0	2	2	2
ATP8B2	0	0	0	1	1	1
ATP8B3	0	0	4	0	4	0
ATP8B4	0	0	0	2	2	2
ATP9B	0	6	0	1	7	7
ATPAF2	0	0	0	5	5	5
ATR	0	1	0	1	2	2
ATRX	0	1	0	6	7	7
ATXN2	1	0	0	0	1	0
ATXN3L	0	1	0	0	1	1
AURKB	0	0	0	1	1	1
AURKC	0	0	0	1	1	1
AVIL	0	1	0	0	1	1
AVPR1B	0	1	0	1	2	2
AWAT1	0	0	0	2	2	2
AZI1	0	0	0	2	2	2
AZU1	0	0	0	1	1	1
B3GALNT2	0	0	0	1	1	1
B3GNT4	0	4	0	2	6	6
B3GNT6	0	0	0	2	2	2
B3GNTL1	1	0	0	0	1	0
B4GALNT3	0	1	0	0	1	1
B4GALT3	0	0	0	3	3	3
B7H6	0	0	0	5	5	5
BACH2	0	0	0	1	1	1
BAG4	0	1	0	0	1	1
BAHD1	0	1	0	1	2	2

BAI2	0	0	0	1	1	1
BAI3	0	5	0	0	5	5
BAIAP2L1	4	1	0	0	5	1
BAIAP2L2	0	0	0	1	1	1
BARHL1	0	0	0	1	1	1
BARX2	0	0	0	1	1	1
BAX	0	0	0	1	1	1
BAZ1A	0	0	0	1	1	1
BAZ1B	0	4	0	5	9	9
BAZ2A	0	0	0	1	1	1
BBOX1	0	1	0	0	1	1
BBS10	0	0	0	1	1	1
BBS12	0	0	0	5	5	5
BBS7	0	0	0	1	1	1
BBS9	1	0	0	0	1	0
BCAP29	0	0	0	1	1	1
BCAT1	0	1	0	0	1	1
BCCIP	1	0	0	1	2	1
BCDIN3D	0	0	0	1	1	1
BCHE	0	0	0	1	1	1
BCL2L12	0	2	0	0	2	2
BCL2L14	0	0	0	1	1	1
BCL2L2- PABPN1	0	0	0	2	2	2
BCL3	0	0	0	1	1	1
BCL6	0	0	0	1	1	1
BCL7C	0	0	0	1	1	1
BCL9	0	0	0	1	1	1
BCL9L	0	0	0	1	1	1
BCLAF1	0	5	0	15	20	20
BCO2	0	0	0	1	1	1
BCOR	0	0	0	1	1	1
BCORL1	0	0	0	1	1	1
BDKRB1	0	2	0	0	2	2
BEND2	0	0	0	2	2	2
BEND5	0	0	0	1	1	1
BEND7	0	0	0	2	2	2
BEST3	0	0	0	15	15	15
BFSP1	1	0	0	4	5	4
BFSP2	0	0	0	1	1	1
BGLAP	0	1	0	0	1	1
BHMT2	1	0	0	0	1	0
BICD2	0	0	0	1	1	1
BIRC6	0	3	0	1	4	4
BLM	0	0	0	2	2	2

BLVRA	0	1	0	0	1	1
BLZF1	0	2	0	0	2	2
BMP2K	0	6	0	0	6	6
BMP7	0	0	0	1	1	1
BMP8A	1	0	0	0	1	0
BMPR2	0	0	0	2	2	2
BMX	0	0	0	1	1	1
BORA	0	0	0	1	1	1
BPGM	0	0	1	0	1	0
BPHL	3	0	0	0	3	0
BPI	0	0	0	1	1	1
BPIFA1	1	0	0	0	1	0
BPIFA2	0	1	0	0	1	1
BPIFA3	0	2	0	0	2	2
BPIFB3	6	1	0	0	7	1
BPIFB6	0	1	0	1	2	2
BRAP	0	0	0	1	1	1
BRCA1	2	6	0	28	36	34
BRCA2	1	6	0	19	26	25
BRD4	0	2	0	0	2	2
BRD9	0	0	0	1	1	1
BRDT	0	1	0	0	1	1
BRIP1	0	0	0	3	3	3
BRIX1	2	0	0	0	2	0
BRMS1	1	0	0	0	1	0
BROX	0	0	0	12	12	12
BRP44	0	0	0	2	2	2
BRPF1	0	1	0	4	5	5
BRSK1	1	0	0	3	4	3
BRWD3	0	0	0	1	1	1
BSN	0	0	0	2	2	2
BSPRY	0	0	1	0	1	0
BTAF1	0	3	0	0	3	3
BTBD6	0	0	0	2	2	2
BTBD7	0	0	0	2	2	2
BTD	0	4	0	0	4	4
BTK	0	1	0	1	2	2
BTN2A1	0	2	0	0	2	2
BTN2A2	1	0	0	0	1	0
BTN3A2	0	1	0	0	1	1
BTN3A3	0	6	0	0	6	6
BTNL9	0	0	0	7	7	7
BUD31	0	0	0	1	1	1
BYSL	0	1	0	0	1	1
C10ORF10	0	1	0	0	1	1

C10ORF11	0	0	0	3	3	3
C10ORF113	1	0	0	0	1	0
C10ORF12	0	0	0	2	2	2
C10ORF120	0	1	0	0	1	1
C10ORF128	0	2	0	0	2	2
C10ORF131	0	1	0	0	1	1
C10ORF27	0	3	0	3	6	6
C10ORF32	2	0	0	0	2	0
C10ORF53	0	2	0	1	3	3
C10ORF62	0	1	0	0	1	1
C10ORF68	0	1	0	10	11	11
C10ORF71	0	0	0	2	2	2
C10ORF90	0	1	0	0	1	1
C10ORF91	0	0	0	3	3	3
C10ORF92	0	1	0	0	1	1
C11ORF1	0	11	0	0	11	11
C11ORF16	0	0	0	2	2	2
C11ORF40	4	0	0	0	4	0
C11ORF54	0	1	0	1	2	2
C11ORF63	0	0	0	1	1	1
C11ORF65	0	3	0	0	3	3
C11ORF71	0	2	0	0	2	2
C11ORF82	0	0	0	1	1	1
C11ORF84	1	0	0	0	1	0
C12ORF26	0	0	0	3	3	3
C12ORF35	0	1	0	0	1	1
C12ORF39	1	0	0	0	1	0
C12ORF4	0	1	0	0	1	1
C12ORF48	0	0	0	1	1	1
C12ORF49	0	1	0	0	1	1
C12ORF50	0	1	0	0	1	1
C12ORF56	0	1	0	1	2	2
C12ORF65	0	0	0	1	1	1
C12ORF69	0	1	0	0	1	1
C12ORF74	0	1	0	0	1	1
C13ORF16	0	0	0	2	2	2
C14ORF105	0	1	0	0	1	1
C14ORF118	0	3	0	0	3	3
C14ORF133	0	1	0	5	6	6
C14ORF135	0	0	0	1	1	1
C14ORF176	0	0	0	1	1	1
C14ORF182	0	0	0	2	2	2
C14ORF183	0	0	0	1	1	1
C14ORF39	1	0	0	0	1	0
C14ORF93	1	0	0	0	1	0

C15ORF32	0	1	0	0	1	1
C15ORF33	0	2	0	0	2	2
C15ORF59	0	0	0	1	1	1
C16ORF55	0	0	0	3	3	3
C16ORF62	0	3	0	0	3	3
C16ORF89	0	1	0	0	1	1
C16ORF93	0	0	0	1	1	1
C17ORF101	5	0	0	0	5	0
C17ORF104	0	3	0	0	3	3
C17ORF28	2	0	0	0	2	0
C17ORF56	1	0	0	0	1	0
C17ORF57	12	12	0	2	26	14
C17ORF58	0	0	5	0	5	0
C17ORF63	0	1	0	0	1	1
C17ORF66	0	2	0	0	2	2
C17ORF74	0	0	0	1	1	1
C17ORF77	0	7	0	0	7	7
C17ORF80	2	0	0	0	2	0
C17ORF81	0	2	0	0	2	2
C17ORF85	0	3	0	0	3	3
C18ORF21	0	2	0	0	2	2
C18ORF34	2	0	0	3	5	3
C19ORF21	1	1	0	0	2	1
C19ORF47	0	0	0	3	3	3
C19ORF48	0	1	0	0	1	1
C19ORF55	0	0	0	3	3	3
C19ORF57	0	0	0	1	1	1
C19ORF59	0	4	0	0	4	4
C19ORF75	1	0	0	1	2	1
C1ORF105	0	0	0	1	1	1
C1ORF112	0	1	0	1	2	2
C1ORF122	0	0	0	1	1	1
C1ORF127	9	0	0	0	9	0
C1ORF135	0	0	0	6	6	6
C1ORF141	0	0	0	5	5	5
C1ORF158	1	1	0	0	2	1
C1ORF168	4	6	0	3	13	9
C1ORF173	0	0	0	1	1	1
C1ORF177	0	2	0	5	7	7
C1ORF187	0	0	0	2	2	2
C1ORF189	0	1	0	6	7	7
C1ORF210	0	1	0	0	1	1
C1ORF216	0	1	0	1	2	2
C1ORF227	0	4	0	0	4	4
C1ORF50	0	1	0	0	1	1

C1ORF51	0	0	0	1	1	1
C1ORF85	1	0	0	0	1	0
C1ORF87	0	1	0	0	1	1
C1ORF88	0	0	0	1	1	1
C1ORF9	0	1	0	0	1	1
C1QB	0	0	0	1	1	1
C1QBP	1	0	0	0	1	0
C1QC	0	0	0	2	2	2
C1QTNF1	0	1	0	0	1	1
C1QTNF2	0	1	0	1	2	2
C1QTNF3	0	0	0	1	1	1
C1QTNF5	0	0	0	2	2	2
C1QTNF9	0	1	0	0	1	1
C1R	0	0	0	1	1	1
C1RL	0	0	0	1	1	1
C20ORF106	0	1	0	0	1	1
C20ORF107	0	0	0	1	1	1
C20ORF118	0	0	0	1	1	1
C20ORF132	0	0	0	6	6	6
C20ORF141	0	0	0	2	2	2
C20ORF152	0	1	0	0	1	1
C20ORF26	0	1	0	1	2	2
C20ORF4	0	0	0	1	1	1
C20ORF85	0	0	0	1	1	1
C20ORF94	0	0	0	2	2	2
C20ORF96	1	0	0	0	1	0
C21ORF2	0	0	0	1	1	1
C21ORF33	0	0	0	1	1	1
C21ORF59	0	1	0	0	1	1
C22ORF15	0	4	0	0	4	4
C22ORF23	0	0	0	1	1	1
C22ORF25	0	1	0	0	1	1
C22ORF29	0	1	0	1	2	2
C22ORF31	0	0	0	1	1	1
C22ORF33	2	1	0	0	3	1
C22ORF42	1	0	0	5	6	5
C2CD3	1	0	0	1	2	1
C2ORF3	1	0	0	0	1	0
C2ORF40	0	3	0	0	3	3
C2ORF42	0	0	0	3	3	3
C2ORF44	0	0	0	2	2	2
C2ORF56	0	1	0	0	1	1
C2ORF57	0	0	0	3	3	3
C2ORF63	5	4	0	0	9	4
C2ORF65	0	0	0	5	5	5

C2ORF67	0	0	0	1	1	1
C2ORF68	0	1	0	0	1	1
C2ORF76	0	0	0	2	2	2
C2ORF77	0	1	0	0	1	1
C2ORF78	0	0	0	1	1	1
C2ORF80	0	1	0	0	1	1
C2ORF85	0	0	0	1	1	1
C3ORF20	0	0	0	1	1	1
C3ORF25	0	18	0	0	18	18
C3ORF32	0	1	0	1	2	2
C3ORF33	0	1	0	1	2	2
C3ORF62	0	1	0	0	1	1
C3ORF64	0	0	0	1	1	1
C3ORF67	0	1	0	0	1	1
C3ORF72	0	0	0	10	10	10
C3ORF77	0	0	0	1	1	1
C4BPA	1	0	0	0	1	0
C4ORF17	1	0	0	27	28	27
C4ORF21	1	0	0	1	2	1
C4ORF27	0	0	0	1	1	1
C4ORF29	0	1	0	0	1	1
C4ORF32	0	0	0	1	1	1
C4ORF33	0	4	0	0	4	4
C4ORF37	0	1	0	2	3	3
C4ORF39	0	0	0	1	1	1
C4ORF46	0	0	0	1	1	1
C4ORF47	0	0	0	3	3	3
C4ORF51	0	0	0	1	1	1
C4ORF6	0	0	0	2	2	2
C5	0	0	0	4	4	4
C5ORF25	0	7	0	0	7	7
C5ORF28	0	1	0	0	1	1
C5ORF34	0	1	0	0	1	1
C5ORF42	0	3	0	0	3	3
C5ORF45	0	7	0	0	7	7
C5ORF48	0	0	1	0	1	0
C5ORF49	0	2	0	0	2	2
C5ORF54	0	0	0	1	1	1
C5ORF55	0	0	0	1	1	1
C6	3	2	0	1	6	3
C6ORF1	0	1	0	0	1	1
C6ORF10	0	0	0	1	1	1
C6ORF106	2	0	0	0	2	0
C6ORF118	0	0	0	1	1	1
C6ORF125	0	0	0	14	14	14

C6ORF130	0	1	0	0	1	1
C6ORF146	0	0	0	1	1	1
C6ORF165	0	1	0	1	2	2
C6ORF186	1	1	0	0	2	1
C6ORF191	0	0	0	1	1	1
C6ORF203	0	0	0	1	1	1
C6ORF211	0	0	0	1	1	1
C6ORF222	0	0	0	2	2	2
C6ORF26	0	1	0	0	1	1
C6ORF70	1	0	0	0	1	0
C7	3	0	0	1	4	1
C7ORF10	0	0	0	2	2	2
C7ORF29	0	0	0	5	5	5
C7ORF43	1	0	0	1	2	1
C7ORF46	0	0	0	3	3	3
C7ORF49	0	0	0	1	1	1
C7ORF52	0	0	0	1	1	1
C7ORF63	0	2	0	1	3	3
C7ORF68	0	0	0	1	1	1
C7ORF72	0	0	0	1	1	1
C8B	0	11	0	0	11	11
C8ORF44	0	7	0	4	11	11
C8ORF44-SGK3	6	0	0	0	6	0
C8ORF74	0	0	0	2	2	2
C8ORF80	0	0	0	2	2	2
C8ORF85	0	1	0	0	1	1
C9	0	1	0	1	2	2
C9ORF102	0	0	0	1	1	1
C9ORF117	0	0	1	0	1	0
C9ORF128	0	1	0	0	1	1
C9ORF129	0	3	0	0	3	3
C9ORF131	0	0	0	2	2	2
C9ORF135	0	1	0	0	1	1
C9ORF152	0	0	0	14	14	14
C9ORF153	0	1	0	0	1	1
C9ORF21	1	0	0	0	1	0
C9ORF25	0	0	0	1	1	1
C9ORF3	1	0	0	2	3	2
C9ORF30-TMEFF1	0	1	0	0	1	1
C9ORF66	0	1	0	0	1	1
C9ORF7	0	0	0	1	1	1
C9ORF71	0	0	1	0	1	0
C9ORF79	0	0	0	1	1	1
C9ORF86	0	0	0	5	5	5

C9ORF91	0	0	0	1	1	1
C9ORF93	0	0	0	1	1	1
CA1	1	0	0	0	1	0
CA11	4	0	0	0	4	0
CA3	0	0	0	1	1	1
CA5A	0	1	0	0	1	1
CA5B	1	0	0	1	2	1
CAB39L	0	0	0	1	1	1
CABIN1	0	0	0	3	3	3
CABYR	0	0	0	2	2	2
CACHD1	2	0	0	0	2	0
CACNA1A	0	6	0	0	6	6
CACNA1B	1	4	0	1	6	5
CACNA1D	0	1	0	6	7	7
CACNA1E	0	1	0	0	1	1
CACNA1G	1	0	0	3	4	3
CACNA1S	1	0	0	3	4	3
CACNA2D2	0	0	0	1	1	1
CACNA2D4	0	2	0	0	2	2
CACNB1	0	0	0	1	1	1
CACNG6	0	0	0	1	1	1
CAD	2	0	0	2	4	2
CADM4	6	0	0	0	6	0
CADPS	0	3	0	0	3	3
CAGE1	0	1	0	0	1	1
CALCR	0	0	0	1	1	1
CALHM2	0	0	0	4	4	4
CALM1	2	0	0	0	2	0
CALML4	0	12	0	0	12	12
CALML5	0	0	0	2	2	2
CAMK1	0	0	0	1	1	1
CAMK2A	1	0	0	1	2	1
CAMK2B	0	0	0	1	1	1
CAMKV	0	0	0	1	1	1
CAMLG	0	0	1	0	1	0
CAMSAP1	1	0	0	0	1	0
CAMTA2	0	1	0	2	3	3
CANT1	0	0	0	2	2	2
CANX	0	1	0	0	1	1
CAPG	0	0	0	3	3	3
CAPN11	1	1	0	0	2	1
CAPN14	0	1	0	0	1	1
CAPN2	0	3	0	0	3	3
CAPN5	0	0	0	1	1	1
CAPN6	0	2	0	0	2	2

CAPN7	0	0	0	5	5	5
CAPN9	5	0	0	0	5	0
CAPRN2	0	0	0	1	1	1
CAPS2	1	7	0	0	8	7
CAPSL	0	0	0	12	12	12
CARD10	0	1	0	0	1	1
CARD14	0	0	0	1	1	1
CARD17	3	0	0	0	3	0
CARM1	0	0	0	1	1	1
CARS2	0	2	0	3	5	5
CARTPT	0	0	5	0	5	0
CASKIN2	0	0	0	2	2	2
CASP10	0	1	0	0	1	1
CASP14	0	0	1	0	1	0
CASP4	0	0	0	2	2	2
CASP5	0	0	0	25	25	25
CASP8	1	0	0	0	1	0
CASP8AP2	0	0	0	1	1	1
CASP9	0	7	0	1	8	8
CASR	0	0	0	2	2	2
CATSPER1	1	0	0	0	1	0
CATSPER2	1	1	0	0	2	1
CATSPERG	0	1	0	1	2	2
CAV3	0	0	0	1	1	1
CBFA2T2	0	2	0	0	2	2
CBLC	0	0	0	7	7	7
CBX3	3	0	0	0	3	0
CBX4	0	0	0	1	1	1
CBX8	0	0	0	2	2	2
CBY1	0	0	0	1	1	1
CC2D1B	0	0	0	2	2	2
CC2D2B	0	1	0	0	1	1
CCBL2	0	0	0	1	1	1
CCBP2	0	0	0	2	2	2
CCDC102B	0	1	0	0	1	1
CCDC105	0	0	0	5	5	5
CCDC108	0	1	0	4	5	5
CCDC11	0	1	0	0	1	1
CCDC111	0	0	0	3	3	3
CCDC121	0	0	0	7	7	7
CCDC122	0	1	0	0	1	1
CCDC127	0	1	0	0	1	1
CCDC129	0	0	0	2	2	2
CCDC13	0	0	0	1	1	1
CCDC132	4	0	0	0	4	0

CCDC135	0	0	0	1	1	1
CCDC14	0	1	0	0	1	1
CCDC144A	0	1	0	0	1	1
CCDC144NL	1	0	0	0	1	0
CCDC146	0	0	0	1	1	1
CCDC147	1	0	0	0	1	0
CCDC148	2	0	0	1	3	1
CCDC150	0	1	0	15	16	16
CCDC153	0	1	0	0	1	1
CCDC27	0	0	0	2	2	2
CCDC30	0	1	0	0	1	1
CCDC37	0	0	0	2	2	2
CCDC38	0	1	0	0	1	1
CCDC39	0	0	0	4	4	4
CCDC40	0	0	0	2	2	2
CCDC51	0	1	0	0	1	1
CCDC57	0	0	0	1	1	1
CCDC59	0	0	0	1	1	1
CCDC60	0	0	0	1	1	1
CCDC62	0	1	0	0	1	1
CCDC63	0	0	0	1	1	1
CCDC65	18	2	0	2	22	4
CCDC66	0	3	0	8	11	11
CCDC67	0	0	0	1	1	1
CCDC7	0	1	0	18	19	19
CCDC73	0	1	0	0	1	1
CCDC77	0	2	0	2	4	4
CCDC78	0	1	0	0	1	1
CCDC8	0	0	0	1	1	1
CCDC81	0	1	0	0	1	1
CCDC83	1	0	0	0	1	0
CCDC84	1	0	0	0	1	0
CCDC85A	0	0	0	2	2	2
CCDC86	0	0	0	1	1	1
CCDC89	0	1	0	1	2	2
CCDC9	0	2	0	0	2	2
CCDC90A	0	0	0	1	1	1
CCDC94	1	0	0	0	1	0
CCDC96	0	0	0	1	1	1
CCDC97	0	0	0	1	1	1
CCDC99	0	0	0	1	1	1
CCHCR1	4	0	0	1	5	1
CCKBR	0	0	0	2	2	2
CCL25	0	0	8	0	8	0
CCL26	0	5	0	0	5	5

CCNB1IP1	0	0	0	1	1	1
CCND2	0	0	0	1	1	1
CCNDBP1	0	0	0	1	1	1
CCNF	0	0	0	1	1	1
CCNI2	0	0	0	1	1	1
CCR1	0	0	0	1	1	1
CCR8	0	0	0	1	1	1
CCR9	0	0	0	1	1	1
CCRN4L	0	1	0	0	1	1
CCT5	0	3	0	0	3	3
CCT6B	1	0	2	0	3	0
CCT8L2	0	5	0	0	5	5
CD101	0	1	0	0	1	1
CD109	0	1	0	2	3	3
CD163L1	0	0	0	6	6	6
CD164	1	0	0	0	1	0
CD177	1	1	0	3	5	4
CD180	0	0	0	1	1	1
CD19	0	0	0	1	1	1
CD1A	0	2	0	0	2	2
CD1B	0	1	0	0	1	1
CD200R1	0	0	0	2	2	2
CD200R1L	0	0	0	11	11	11
CD207	0	2	0	0	2	2
CD209	0	0	0	1	1	1
CD22	3	0	0	0	3	0
CD244	0	2	0	0	2	2
CD247	0	0	0	1	1	1
CD27	0	0	0	5	5	5
CD300LB	0	1	0	0	1	1
CD300LG	0	0	0	6	6	6
CD320	0	0	0	1	1	1
CD33	0	0	0	16	16	16
CD36	4	10	0	3	17	13
CD38	0	0	0	1	1	1
CD3EAP	0	0	0	1	1	1
CD5	0	0	0	3	3	3
CD5L	0	3	0	1	4	4
CD6	0	0	0	1	1	1
CD63	0	0	0	1	1	1
CD68	0	0	0	1	1	1
CD72	0	5	0	2	7	7
CD79A	0	0	0	1	1	1
CD97	0	0	0	1	1	1
CDAN1	0	0	0	3	3	3

CDC20B	0	0	0	1	1	1
CDC27	0	4	0	9	13	13
CDC34	0	1	0	0	1	1
CDC42BPB	0	0	0	5	5	5
CDC42BPG	0	0	0	1	1	1
CDC42EP1	0	0	0	1	1	1
CDCA2	0	0	0	1	1	1
CDCA3	0	0	0	2	2	2
CDCP2	0	0	0	21	21	21
CDH10	0	1	0	0	1	1
CDH2	0	0	0	1	1	1
CDH24	0	11	0	0	11	11
CDH26	1	1	0	0	2	1
CDH3	0	0	0	1	1	1
CDH5	8	0	0	0	8	0
CDH7	0	0	0	1	1	1
CDHR3	0	0	0	2	2	2
CDHR4	0	0	0	1	1	1
CDHR5	0	0	0	1	1	1
CDK10	0	0	0	1	1	1
CDK11A	0	1	0	2	3	3
CDK12	1	0	0	0	1	0
CDK13	0	1	0	0	1	1
CDK15	1	0	0	0	1	0
CDK19	1	0	0	0	1	0
CDK2AP2	0	0	0	7	7	7
CDK5RAP1	0	1	0	0	1	1
CDK5RAP2	0	10	0	2	12	12
CDK5RAP3	0	0	0	1	1	1
CDKL2	5	0	0	0	5	0
CDKL3	0	0	0	3	3	3
CDKN2B	0	0	0	1	1	1
CDKN3	0	0	0	1	1	1
CDON	0	2	0	0	2	2
CDR2	0	0	0	1	1	1
CDRT1	0	0	0	2	2	2
CDRT15	2	2	0	0	4	2
CDRT4	0	0	0	1	1	1
CDX2	1	0	0	1	2	1
CEACAM1	0	0	0	3	3	3
CEACAM19	0	0	0	1	1	1
CEACAM20	0	1	0	1	2	2
CEACAM4	1	0	0	0	1	0
CEACAM7	1	2	0	0	3	2
CECR1	1	0	0	0	1	0

CECR2	0	4	0	1	5	5
CELA1	0	0	0	30	30	30
CELA3B	0	0	0	2	2	2
CELF3	0	0	0	1	1	1
CELSR3	0	0	0	3	3	3
CENPBD1	0	3	0	0	3	3
CENPE	1	0	0	4	5	4
CENPJ	0	1	0	0	1	1
CEP128	0	0	0	1	1	1
CEP135	0	0	0	1	1	1
CEP152	0	0	0	1	1	1
CEP164	0	0	0	2	2	2
CEP192	2	0	0	0	2	0
CEP250	0	0	0	4	4	4
CEP290	14	2	0	1	17	3
CEP44	0	0	0	1	1	1
CEP55	0	1	0	0	1	1
CEP57L1	0	0	0	1	1	1
CEP68	0	1	0	1	2	2
CEP70	0	1	0	0	1	1
CEP78	1	0	0	0	1	0
CEP85	0	4	0	0	4	4
CEP89	0	2	0	0	2	2
CEP95	0	0	0	1	1	1
CER1	0	1	0	0	1	1
CERCAM	0	0	0	1	1	1
CERKL	0	1	0	0	1	1
CERS5	1	0	0	0	1	0
CES1	3	0	0	0	3	0
CES2	0	0	0	1	1	1
CES3	0	3	0	0	3	3
CES5A	0	7	0	2	9	9
CETN3	0	0	0	3	3	3
CFDP1	1	0	0	0	1	0
CFHR1	1	1	0	0	2	1
CFHR2	0	6	0	0	6	6
CFHR3	1	0	0	1	2	1
CFHR4	1	0	0	0	1	0
CFHR5	0	1	0	7	8	8
CFTR	0	1	0	0	1	1
CGB5	0	1	0	0	1	1
CGN	0	1	0	0	1	1
CHAC2	0	0	0	1	1	1
CHAF1A	0	0	0	1	1	1
CHAF1B	1	0	0	0	1	0

CHCHD4	0	1	0	1	2	2
CHCHD6	0	0	0	1	1	1
CHD1L	2	1	0	0	3	1
CHD2	0	0	0	2	2	2
CHD3	0	1	0	1	2	2
CHD5	0	0	0	1	1	1
CHD6	0	4	0	0	4	4
CHD9	0	0	0	2	2	2
CHEK2	0	0	0	2	2	2
CHERP	0	0	0	2	2	2
CHI3L1	0	2	0	0	2	2
CHI3L2	0	0	0	1	1	1
CHIC2	0	1	0	0	1	1
CHIT1	1	1	0	2	4	3
CHL1	0	0	0	1	1	1
CHP2	0	3	0	2	5	5
CHPF	0	1	0	0	1	1
CHPF2	0	0	0	1	1	1
CHRFAM7A	0	0	0	2	2	2
CHRM1	0	0	0	1	1	1
CHRNA1	1	0	0	1	2	1
CHRNA2	0	0	0	1	1	1
CHRNA4	0	0	0	1	1	1
CHRNA6	0	0	0	1	1	1
CHRNA7	0	0	0	3	3	3
CHRN3	1	0	0	1	2	1
CHRNA3	1	0	0	0	1	0
CHST15	0	0	0	1	1	1
CHST5	0	0	0	1	1	1
CHTOP	0	0	0	1	1	1
CIAO1	1	0	0	1	2	1
CIB4	0	1	0	0	1	1
CIDEA	0	0	0	1	1	1
CIDEB	2	0	0	0	2	0
CKAP5	0	0	0	1	1	1
CKB	0	0	0	3	3	3
CKM	0	0	1	0	1	0
CLASP1	0	2	0	1	3	3
CLCA2	0	1	0	3	4	4
CLCA4	0	0	0	2	2	2
CLCN1	1	0	0	0	1	0
CLCN2	0	0	0	1	1	1
CLCN3	0	0	0	4	4	4
CLCN6	0	0	0	1	1	1
CLCNKA	0	0	0	3	3	3

CLDN24	0	1	0	0	1	1
CLDN5	0	1	0	0	1	1
CLEC12B	0	0	0	3	3	3
CLEC16A	0	2	0	0	2	2
CLEC18B	0	0	0	1	1	1
CLEC1A	0	0	0	1	1	1
CLEC2D	0	0	0	1	1	1
CLEC3A	0	0	0	1	1	1
CLEC4F	0	1	0	1	2	2
CLEC6A	0	1	0	0	1	1
CLIC2	0	0	0	1	1	1
CLLU1	0	0	0	8	8	8
CLNS1A	0	2	0	0	2	2
CLP1	0	0	0	2	2	2
CLPTM1	0	1	0	0	1	1
CLRN1	0	0	0	1	1	1
CLSTN2	0	1	0	0	1	1
CLSTN3	0	0	0	1	1	1
CLTB	1	0	0	0	1	0
CLTC	0	1	0	0	1	1
CLTCL1	0	0	0	2	2	2
CLUAP1	0	0	0	7	7	7
CLVS1	0	0	0	1	1	1
CMA1	0	2	0	1	3	3
CMAS	0	0	0	13	13	13
CMIP	0	0	0	1	1	1
CMPK2	0	0	0	2	2	2
CMTM2	1	0	0	0	1	0
CMYA5	0	3	0	2	5	5
CNDP1	0	0	0	1	1	1
CNDP2	0	0	0	1	1	1
CNGA1	0	1	0	0	1	1
CNGA3	1	0	0	1	2	1
CNGB3	0	0	0	5	5	5
CNCSR1	1	1	0	2	4	3
CNCSR2	1	0	0	0	1	0
CNCSR3	0	0	0	6	6	6
CNNM2	0	0	0	2	2	2
CNNM3	0	1	0	0	1	1
CNOT3	0	0	0	8	8	8
CNPY2	0	0	0	1	1	1
CNTD2	0	0	0	1	1	1
CNTF	0	2	0	1	3	3
CNTLN	0	1	0	0	1	1
CNTN1	0	0	0	5	5	5

CNTN2	0	15	0	0	15	15
CNTN3	0	0	0	1	1	1
CNTN6	0	1	0	1	2	2
CNTNAP1	9	0	0	1	10	1
CNTNAP3	1	0	0	14	15	14
CNTNAP3B	0	0	0	2	2	2
CNTNAP4	0	0	11	0	11	0
CNTROB	0	0	0	1	1	1
COASY	0	2	0	0	2	2
COBLL1	0	1	0	0	1	1
COG2	0	0	0	1	1	1
COG4	0	0	0	1	1	1
COG7	0	0	0	1	1	1
COL11A2	0	6	0	0	6	6
COL13A1	0	0	0	2	2	2
COL14A1	0	0	0	1	1	1
COL15A1	1	0	0	0	1	0
COL16A1	3	0	0	1	4	1
COL17A1	0	0	0	1	1	1
COL19A1	0	0	0	1	1	1
COL1A1	4	0	0	1	5	1
COL22A1	0	0	0	2	2	2
COL23A1	1	0	0	0	1	0
COL24A1	0	2	0	3	5	5
COL25A1	0	1	0	0	1	1
COL28A1	0	3	0	0	3	3
COL2A1	0	0	0	1	1	1
COL4A1	0	1	0	2	3	3
COL4A2	0	0	0	1	1	1
COL4A4	0	0	0	1	1	1
COL4A5	0	1	0	14	15	15
COL4A6	0	0	0	3	3	3
COL5A1	0	0	0	1	1	1
COL5A2	0	0	0	1	1	1
COL6A5	0	11	0	5	16	16
COL7A1	0	2	0	0	2	2
COL9A1	1	0	0	0	1	0
COL9A2	1	2	0	0	3	2
COLEC11	0	0	0	1	1	1
COLEC12	0	0	0	1	1	1
COMMD10	0	1	0	0	1	1
COMMD2	0	1	0	0	1	1
COPB1	0	0	0	1	1	1
COPG	0	0	0	1	1	1
COPS7A	0	2	0	0	2	2

COPZ1	0	0	0	1	1	1
COQ5	0	1	0	0	1	1
COQ6	0	4	0	0	4	4
CORO1C	0	0	0	1	1	1
CORO2A	1	0	12	0	13	0
CORO2B	0	0	0	1	1	1
COX6A1	0	0	0	2	2	2
COX6B2	0	0	0	1	1	1
CPA1	0	1	0	0	1	1
CPA4	0	2	0	0	2	2
CPB2	0	0	0	1	1	1
CPD	0	0	0	1	1	1
CPEB3	0	0	0	1	1	1
CPEB4	0	0	0	1	1	1
CPNE1	0	0	0	1	1	1
CPNE3	1	0	0	0	1	0
CPNE7	0	1	0	0	1	1
CPNE9	1	0	0	0	1	0
CPO	0	1	0	0	1	1
CPS1	0	0	0	1	1	1
CPSF1	0	0	0	5	5	5
CPT2	0	0	0	1	1	1
CPVL	0	16	0	1	17	17
CPXM1	0	0	1	1	2	1
CPXM2	0	0	0	2	2	2
CPZ	0	1	0	0	1	1
CR2	0	1	0	0	1	1
CRAT	0	0	0	1	1	1
CRB1	0	0	0	2	2	2
CRBN	1	0	0	0	1	0
CRCT1	0	1	0	0	1	1
CREB3L1	2	0	0	0	2	0
CREBBP	0	0	0	3	3	3
CREG2	0	1	0	0	1	1
CRELD1	0	0	0	2	2	2
CRHR2	0	1	0	4	5	5
CRIPAK	0	0	0	20	20	20
CRISP1	0	1	0	0	1	1
CRISPLD1	0	1	0	0	1	1
CRISPLD2	1	0	0	0	1	0
CRLF1	0	0	0	1	1	1
CRNKL1	0	1	0	0	1	1
CROCC	0	1	0	1	2	2
CROT	0	0	0	2	2	2
CRTC2	1	0	0	0	1	0

CRX	0	0	0	1	1	1
CRY1	0	0	0	3	3	3
CRYBA4	7	1	0	0	8	1
CRYBB2	1	0	0	0	1	0
CRYGA	0	3	0	0	3	3
CRYGC	0	1	0	0	1	1
CS	0	1	0	0	1	1
CSAG1	0	21	0	0	21	21
CSDC2	0	0	0	1	1	1
CSE1L	0	0	0	1	1	1
CSF1R	0	1	0	10	11	11
CSF2RB	0	0	0	4	4	4
CSF3	0	0	0	1	1	1
CSGALNACT2	0	3	0	0	3	3
CSH1	0	0	0	1	1	1
CSH2	0	0	2	0	2	0
CSHL1	0	0	0	3	3	3
CSMD1	0	7	10	0	17	7
CSMD2	0	0	0	1	1	1
CSMD3	0	2	0	1	3	3
CSN1S1	4	0	0	0	4	0
CSPG4	0	0	0	4	4	4
CSPP1	0	0	0	1	1	1
CST2	0	2	0	0	2	2
CST3	0	1	0	1	2	2
CST4	0	0	0	1	1	1
CST7	0	0	0	1	1	1
CST8	0	2	0	0	2	2
CST9	0	0	0	1	1	1
CSTL1	1	0	0	0	1	0
CT62	0	1	0	0	1	1
CTAGE9	0	0	0	1	1	1
CTBP2	0	14	0	7	21	21
CTC1	1	0	0	0	1	0
CTCFL	0	0	0	1	1	1
CTDSP2	0	0	0	11	11	11
CTF1	1	0	0	0	1	0
CTH	0	0	0	2	2	2
CTNNA2	0	1	0	0	1	1
CTNNA3	0	0	0	1	1	1
CTNNAL1	0	3	0	0	3	3
CTNND2	15	0	0	0	15	0
CTPS	1	0	0	0	1	0
CTR9	0	0	0	1	1	1
CTSA	0	0	0	2	2	2

CTSB	0	2	0	0	2	2
CTSC	0	0	0	1	1	1
CTSE	2	1	0	0	3	1
CTSW	1	0	0	1	2	1
CUBN	0	1	0	1	2	2
CUL4B	0	0	0	1	1	1
CUL7	1	1	0	0	2	1
CUL9	0	0	0	3	3	3
CUTA	0	0	1	0	1	0
CUTC	0	0	0	1	1	1
CWC22	2	0	0	0	2	0
CWC25	1	1	0	5	7	6
CWH43	0	0	0	13	13	13
CX3CR1	0	0	0	1	1	1
CXADR	0	0	0	1	1	1
CXCL5	0	0	0	1	1	1
CXCL6	0	0	0	7	7	7
CXCL9	0	1	0	0	1	1
CXCR2	0	0	0	1	1	1
CXORF22	0	1	0	1	2	2
CXORF23	0	1	0	0	1	1
CXORF40B	0	0	0	1	1	1
CXORF56	0	0	0	2	2	2
CXORF58	7	0	0	0	7	0
CYB561D2	0	2	0	0	2	2
CYB5D1	1	0	0	0	1	0
CYB5R1	1	0	0	0	1	0
CYB5R4	0	1	0	1	2	2
CYFIP1	0	0	0	2	2	2
CYFIP2	0	2	0	1	3	3
CYP11B2	1	0	0	2	3	2
CYP19A1	0	0	0	17	17	17
CYP1A1	0	1	0	1	2	2
CYP1B1	0	0	0	1	1	1
CYP24A1	0	1	0	1	2	2
CYP26C1	0	0	0	1	1	1
CYP2A13	0	3	0	1	4	4
CYP2A6	0	1	0	0	1	1
CYP2C18	0	5	0	0	5	5
CYP2C19	0	1	0	0	1	1
CYP2C9	1	0	0	2	3	2
CYP2D6	0	0	0	12	12	12
CYP2E1	2	0	0	0	2	0
CYP2J2	0	0	0	1	1	1
CYP2S1	0	1	0	0	1	1

CYP3A4	0	0	0	2	2	2
CYP3A43	0	1	0	0	1	1
CYP3A5	0	0	0	14	14	14
CYP46A1	1	0	0	0	1	0
CYP4A22	0	1	0	1	2	2
CYP4B1	0	1	0	0	1	1
CYP4F11	0	0	0	1	1	1
CYP4F12	2	0	0	0	2	0
CYP4F3	0	1	0	0	1	1
CYP4F8	1	0	0	0	1	0
CYP7A1	0	1	0	0	1	1
CYP8B1	0	0	0	1	1	1
CYTH1	1	0	0	0	1	0
CYYR1	1	0	0	0	1	0
DAB2	0	0	0	2	2	2
DAB2IP	0	0	0	2	2	2
DAGLB	0	0	0	1	1	1
DAK	0	0	0	1	1	1
DAPL1	0	5	0	0	5	5
DARS2	1	0	0	0	1	0
DAXX	0	0	0	1	1	1
DAZAP1	0	0	0	1	1	1
DBF4	0	0	0	1	1	1
DBF4B	4	0	0	0	4	0
DBT	0	0	0	1	1	1
DCAF11	0	2	0	0	2	2
DCAF15	0	0	0	1	1	1
DCAF4L2	0	0	0	22	22	22
DCAF6	0	0	0	1	1	1
DCAKD	0	0	0	7	7	7
DCD	0	0	0	1	1	1
DCDC2B	0	0	0	7	7	7
DCDC5	0	1	0	0	1	1
DCHS1	0	0	0	1	1	1
DCLRE1A	0	3	0	0	3	3
DCP1A	0	0	0	1	1	1
DCST2	0	0	0	2	2	2
DCTN1	0	0	0	4	4	4
DCTN6	1	0	0	0	1	0
DCUN1D2	0	1	0	0	1	1
DDB1	0	0	0	1	1	1
DDIT3	0	0	0	2	2	2
DDIT4	0	0	0	1	1	1
DDO	0	1	0	0	1	1
DDOST	0	0	0	2	2	2

DDTL	0	0	0	6	6	6
DDX25	1	0	0	0	1	0
DDX27	0	1	0	1	2	2
DDX39A	0	0	0	1	1	1
DDX41	0	0	0	1	1	1
DDX42	1	0	0	0	1	0
DDX49	0	0	0	2	2	2
DDX54	0	8	0	0	8	8
DDX55	0	0	0	2	2	2
DDX58	0	0	0	1	1	1
DDX59	0	0	0	1	1	1
DDX60	0	1	0	1	2	2
DDX60L	2	1	0	1	4	2
DEFA6	0	4	0	0	4	4
DEFB108B	0	0	0	1	1	1
DEFB126	0	0	0	2	2	2
DEFB128	0	0	0	17	17	17
DEFB132	0	0	2	0	2	0
DEM1	0	0	0	17	17	17
DENND1B	0	10	0	0	10	10
DENND1C	0	0	0	2	2	2
DENND2D	0	1	0	0	1	1
DENND4B	0	0	0	1	1	1
DENND4C	0	1	0	1	2	2
DEPDC1	0	0	0	1	1	1
DEPDC7	0	0	0	1	1	1
DEPTOR	0	0	0	1	1	1
DERL3	0	0	0	1	1	1
DFFA	0	0	0	1	1	1
DFNA5	0	0	0	6	6	6
DGAT2	0	16	0	0	16	16
DGAT2L6	0	1	0	0	1	1
DGCR14	0	1	0	0	1	1
DGCR2	0	17	0	0	17	17
DGCR8	0	0	0	4	4	4
DHCR24	0	1	0	1	2	2
DHCR7	3	1	0	0	4	1
DHDH	0	1	0	0	1	1
DHRS12	0	0	0	1	1	1
DHRS2	0	1	0	1	2	2
DHRS3	0	0	0	2	2	2
DHRS4L2	0	0	0	6	6	6
DHRS7B	0	0	0	1	1	1
DHTKD1	1	1	0	0	2	1
DHX30	0	1	0	1	2	2

DHX32	1	0	0	1	2	1
DHX37	0	0	0	2	2	2
DHX40	0	1	0	0	1	1
DHX58	1	1	0	1	3	2
DIAPH1	0	0	0	2	2	2
DIAPH3	0	0	0	1	1	1
DIDO1	0	0	0	3	3	3
DIMT1	2	0	0	18	20	18
DIP2A	0	0	0	1	1	1
DIP2C	0	3	0	0	3	3
DIS3	0	1	3	0	4	1
DISP2	0	0	0	1	1	1
DIXDC1	1	0	0	0	1	0
DKK3	0	1	0	0	1	1
DKKL1	0	0	0	1	1	1
DLC1	0	0	0	1	1	1
DLEC1	1	1	0	1	3	2
DLGAP3	0	0	0	2	2	2
DLGAP5	0	1	0	0	1	1
DLL3	1	0	0	0	1	0
DLX3	0	1	0	1	2	2
DMBT1	0	1	0	1	2	2
DMC1	0	0	0	1	1	1
DMD	1	0	0	2	3	2
DMGDH	0	4	0	0	4	4
DMKN	0	0	0	1	1	1
DMRTA2	0	0	1	0	1	0
DMXL1	0	0	0	18	18	18
DNAH1	0	0	0	3	3	3
DNAH10	0	3	0	2	5	5
DNAH11	1	10	2	0	13	10
DNAH14	0	2	0	7	9	9
DNAH17	1	0	0	1	2	1
DNAH2	0	1	0	5	6	6
DNAH3	0	7	0	0	7	7
DNAH5	1	1	0	2	4	3
DNAH6	0	1	0	0	1	1
DNAH7	0	9	0	2	11	11
DNAH8	3	1	0	4	8	5
DNAH9	1	1	0	0	2	1
DNAI1	1	0	0	4	5	4
DNAJB1	0	0	0	1	1	1
DNAJB3	0	0	0	1	1	1
DNAJB4	0	3	0	0	3	3
DNAJB7	0	0	0	15	15	15

DNAJC10	0	0	0	2	2	2
DNAJC11	0	0	0	2	2	2
DNAJC12	0	0	0	1	1	1
DNAJC13	0	0	0	3	3	3
DNAJC14	0	2	0	0	2	2
DNAJC15	1	0	0	0	1	0
DNAJC16	0	1	0	0	1	1
DNAJC18	0	4	0	0	4	4
DNAJC21	0	0	0	1	1	1
DNAJC28	0	1	0	0	1	1
DNAJC5	0	0	0	1	1	1
DNASE2	0	0	0	1	1	1
DNASE2B	0	1	0	0	1	1
DNHD1	1	2	0	1	4	3
DNM2	0	0	0	1	1	1
DNMBP	0	0	0	1	1	1
DNMT3A	0	0	0	1	1	1
DNMT3B	0	0	0	1	1	1
DOCK1	1	0	0	0	1	0
DOCK10	0	1	0	0	1	1
DOCK3	0	0	0	3	3	3
DOCK5	0	0	0	1	1	1
DOCK6	2	0	0	1	3	1
DOCK7	0	1	0	1	2	2
DOCK8	0	4	0	1	5	5
DOK1	0	1	0	0	1	1
DOK5	0	0	0	1	1	1
DOLK	0	0	0	2	2	2
DOM3Z	0	0	0	2	2	2
DONSON	1	0	0	0	1	0
DOPEY2	0	0	0	11	11	11
DPEP2	0	2	0	0	2	2
DPP3	1	0	0	0	1	0
DPP6	1	0	0	1	2	1
DPP7	0	0	0	3	3	3
DPP8	0	0	0	10	10	10
DPP9	1	5	0	3	9	8
DPPA2	0	0	0	2	2	2
DPPA3	0	0	0	1	1	1
DPPA4	5	0	0	1	6	1
DPRX	0	1	0	0	1	1
DPY19L2	0	1	0	0	1	1
DPY19L4	0	0	0	1	1	1
DPYD	3	0	0	1	4	1
DQX1	0	4	0	0	4	4

DRAM2	0	1	0	0	1	1
DRD3	1	0	0	0	1	0
DRD5	0	2	0	0	2	2
DROSHA	0	0	0	1	1	1
DSC2	0	0	0	7	7	7
DSCAM	0	0	0	2	2	2
DSCAML1	0	0	0	20	20	20
DSCC1	1	0	0	0	1	0
DSCR3	0	0	0	2	2	2
DSCR6	0	2	0	0	2	2
DSEL	0	0	0	1	1	1
DSG4	0	0	0	1	1	1
DSN1	0	1	0	0	1	1
DSP	1	0	0	0	1	0
DST	0	0	0	1	1	1
DTNBP1	4	1	0	0	5	1
DTWD1	0	1	0	0	1	1
DTX3L	0	1	0	0	1	1
DUOX1	0	1	0	2	3	3
DUOX2	2	0	0	1	3	1
DUOXA1	0	0	0	1	1	1
DUSP1	0	0	0	3	3	3
DUSP11	0	0	0	1	1	1
DUSP12	0	0	0	1	1	1
DUSP16	0	0	0	4	4	4
DUSP18	0	1	0	3	4	4
DUSP6	0	2	0	0	2	2
DUXA	0	0	0	4	4	4
DVL3	0	1	0	0	1	1
DYDC2	3	0	0	1	4	1
DYNC1H1	0	0	0	1	1	1
DYNC1I1	0	0	0	1	1	1
DYNC1LI1	0	1	0	0	1	1
DYNC1LI2	0	0	0	2	2	2
DYNC2H1	0	16	0	2	18	18
DYNC2LI1	1	0	0	1	2	1
DYRK1A	0	2	0	0	2	2
DYRK2	0	0	0	1	1	1
DYTN	0	0	0	2	2	2
DYX1C1	0	1	0	0	1	1
DZANK1	1	0	0	0	1	0
E2F8	0	1	0	0	1	1
EBF4	0	0	0	1	1	1
EBI3	1	0	0	0	1	0
EBLN2	0	10	0	0	10	10

ECD	0	0	0	1	1	1
ECE1	0	0	0	1	1	1
ECEL1	0	1	0	0	1	1
ECHDC2	0	0	0	1	1	1
ECHDC3	1	1	0	0	2	1
ECM2	0	0	0	1	1	1
ECT2	0	1	0	3	4	4
ECT2L	1	5	0	0	6	5
EDA	0	0	0	1	1	1
EDA2R	0	0	0	6	6	6
EDC4	0	0	0	2	2	2
EDDM3B	0	1	0	0	1	1
EDM1	1	0	0	0	1	0
EDN1	0	0	0	1	1	1
EDN3	0	2	0	0	2	2
EDNRB	0	0	0	1	1	1
EEF2	0	0	0	1	1	1
EEF2K	0	2	0	0	2	2
EFCAB3	0	2	0	0	2	2
EFCAB5	3	1	0	0	4	1
EFCAB6	1	0	0	8	9	8
EFCAB7	0	1	0	1	2	2
EFEMP2	0	0	0	2	2	2
EFHA1	0	3	0	1	4	4
EFHB	0	0	0	1	1	1
EFHC1	0	0	0	1	1	1
EFNB1	0	0	0	18	18	18
EFR3A	0	0	0	2	2	2
EGF	0	0	0	5	5	5
EGFL8	0	4	0	0	4	4
EGFR	1	0	0	3	4	3
EGLN2	0	0	0	3	3	3
EHBP1L1	0	0	0	1	1	1
EHD3	0	0	0	2	2	2
EHD4	0	0	0	1	1	1
EIF2A	0	0	0	4	4	4
EIF2AK3	0	0	0	1	1	1
EIF2AK4	4	0	0	1	5	1
EIF2B2	2	0	0	0	2	0
EIF2B3	0	0	0	2	2	2
EIF2B5	0	0	11	1	12	1
EIF2D	1	0	0	0	1	0
EIF3I	0	8	0	0	8	8
EIF3L	0	0	0	1	1	1
EIF4E1B	1	0	0	0	1	0

ELAC2	1	0	0	1	2	1
ELFN2	0	0	0	2	2	2
ELMO3	0	1	0	2	3	3
ELMOD2	0	0	0	1	1	1
ELN	0	0	0	1	1	1
EME1	0	9	0	1	10	10
EMILIN2	0	1	0	1	2	2
EML3	0	0	0	1	1	1
EML5	0	0	0	3	3	3
EML6	0	4	0	0	4	4
EMR1	0	1	0	0	1	1
ENAH	7	0	0	0	7	0
ENAM	0	0	0	1	1	1
ENC1	0	0	0	1	1	1
ENDOD1	0	1	0	0	1	1
ENDOU	1	0	0	1	2	1
ENDOV	8	0	0	0	8	0
ENGASE	0	0	0	7	7	7
ENO3	0	0	0	1	1	1
ENOSF1	0	2	0	1	3	3
ENPEP	0	8	0	1	9	9
ENPP3	0	1	0	0	1	1
ENPP7	1	0	0	0	1	0
ENTHD1	0	0	0	4	4	4
ENTPD2	2	0	0	0	2	0
ENTPD7	0	0	0	1	1	1
EP300	2	0	0	0	2	0
EP400	0	0	0	1	1	1
EPB41L1	0	4	0	0	4	4
EPB41L3	0	1	0	1	2	2
EPB41L5	0	15	0	0	15	15
EPG5	0	1	0	2	3	3
EPHA1	1	0	0	0	1	0
EPHA10	1	1	0	0	2	1
EPHA2	0	0	0	1	1	1
EPHA5	0	1	0	0	1	1
EPHB1	0	0	0	20	20	20
EPHB2	0	0	0	1	1	1
EPHX2	0	1	0	0	1	1
EPHX3	0	0	0	2	2	2
EPN3	0	0	0	3	3	3
EPO	0	0	0	1	1	1
EPOR	1	0	0	0	1	0
EPRS	0	2	0	0	2	2
EPS8L3	1	0	0	1	2	1

EPSTI1	0	2	0	0	2	2
EPT1	0	0	0	1	1	1
EPX	2	14	0	0	16	14
ERAP1	0	0	0	1	1	1
ERAP2	1	0	0	0	1	0
ERBB3	0	1	0	1	2	2
ERC1	0	7	0	0	7	7
ERC2	0	0	0	1	1	1
ERCC2	0	0	0	1	1	1
ERCC3	0	2	0	0	2	2
ERG	1	0	0	0	1	0
ERICH1	0	0	0	2	2	2
ERLEC1	0	0	0	1	1	1
ERMAP	0	1	0	0	1	1
ERMP1	1	0	0	3	4	3
ERN2	1	0	0	0	1	0
ERO1LB	0	0	0	1	1	1
ERV3-1	0	1	0	1	2	2
ERVMER34-1	0	1	0	0	1	1
ESF1	0	0	0	7	7	7
ESR2	2	0	0	0	2	0
ESRP2	0	0	0	1	1	1
ESX1	0	0	0	2	2	2
ESYT1	1	0	0	1	2	1
ETNK2	0	0	0	1	1	1
ETV1	0	0	0	1	1	1
EVPL	0	0	0	1	1	1
EWSR1	0	0	0	1	1	1
EXO1	1	1	0	0	2	1
EXOC4	1	0	0	0	1	0
EXOC8	0	1	0	0	1	1
EXOG	1	0	0	2	3	2
EXOSC9	0	0	0	1	1	1
EXTL3	0	2	0	0	2	2
EYA4	0	1	0	0	1	1
EZH2	2	3	0	2	7	5
F11	0	1	0	0	1	1
F13A1	1	0	0	0	1	0
F2	1	0	0	0	1	0
F2RL1	1	0	0	0	1	0
F5	0	0	0	1	1	1
F7	0	0	0	2	2	2
FAAH	0	0	0	1	1	1
FAAH2	0	2	0	0	2	2
FABP2	1	0	0	0	1	0

FABP4	1	0	0	0	1	0
FABP5	0	0	0	1	1	1
FAH	0	0	0	1	1	1
FAHD2B	0	1	0	0	1	1
FAIM2	0	0	0	1	1	1
FAIM3	0	0	0	1	1	1
FAM101B	0	17	0	0	17	17
FAM102B	0	0	0	1	1	1
FAM108A1	0	0	0	1	1	1
FAM111B	0	1	0	2	3	3
FAM114A1	0	1	0	1	2	2
FAM115C	0	0	0	7	7	7
FAM117A	0	0	0	1	1	1
FAM118B	0	0	0	1	1	1
FAM123B	0	0	0	1	1	1
FAM124A	0	1	0	0	1	1
FAM124B	18	0	0	0	18	0
FAM126A	0	1	0	0	1	1
FAM129A	6	0	0	0	6	0
FAM129C	0	0	0	1	1	1
FAM134A	1	0	0	0	1	0
FAM134C	0	0	0	1	1	1
FAM13A	1	1	0	0	2	1
FAM13C	0	0	0	2	2	2
FAM151A	1	3	0	5	9	8
FAM154A	0	2	0	0	2	2
FAM154B	0	0	0	7	7	7
FAM155A	0	1	0	0	1	1
FAM159A	0	2	0	2	4	4
FAM160A2	0	1	0	2	3	3
FAM160B1	0	0	0	1	1	1
FAM160B2	0	0	0	4	4	4
FAM161A	0	1	0	0	1	1
FAM161B	0	0	0	2	2	2
FAM162A	1	0	0	0	1	0
FAM164C	0	0	0	1	1	1
FAM166A	0	1	0	1	2	2
FAM168B	0	1	0	0	1	1
FAM171A1	0	0	0	1	1	1
FAM173B	0	1	0	1	2	2
FAM174A	0	8	0	0	8	8
FAM175B	0	0	0	1	1	1
FAM177B	0	1	0	0	1	1
FAM178A	0	2	0	0	2	2
FAM179A	1	2	0	1	4	3

FAM179B	0	9	0	0	9	9
FAM180A	0	0	0	1	1	1
FAM183A	0	2	0	0	2	2
FAM187B	0	17	0	0	17	17
FAM188B	0	1	0	0	1	1
FAM194A	0	0	0	3	3	3
FAM194B	0	0	0	13	13	13
FAM205A	0	0	0	1	1	1
FAM207A	0	0	0	1	1	1
FAM208A	0	0	0	2	2	2
FAM208B	0	2	0	0	2	2
FAM21C	0	0	0	1	1	1
FAM3B	0	0	0	1	1	1
FAM3C	0	1	0	0	1	1
FAM40B	0	0	0	1	1	1
FAM47A	0	0	0	1	1	1
FAM47C	0	1	0	0	1	1
FAM47E	1	0	0	0	1	0
FAM48B1	0	0	0	1	1	1
FAM48B2	0	0	0	1	1	1
FAM58A	0	1	0	0	1	1
FAM58BP	0	1	0	0	1	1
FAM59A	0	0	0	10	10	10
FAM5C	0	0	0	1	1	1
FAM63A	0	0	0	1	1	1
FAM63B	0	0	0	3	3	3
FAM65B	0	0	0	1	1	1
FAM70B	0	1	0	0	1	1
FAM71A	0	6	0	0	6	6
FAM71C	0	0	0	1	1	1
FAM71D	0	0	0	15	15	15
FAM71F2	0	1	0	0	1	1
FAM73A	1	1	0	0	2	1
FAM75A3	0	0	0	2	2	2
FAM75C1	0	0	0	1	1	1
FAM75C2	1	1	0	0	2	1
FAM75D1	0	0	0	1	1	1
FAM78A	0	0	0	1	1	1
FAM81B	0	2	0	4	6	6
FAM82A1	3	3	0	0	6	3
FAM82A2	1	0	0	0	1	0
FAM83A	0	3	0	1	4	4
FAM83D	0	0	0	1	1	1
FAM83E	0	0	0	2	2	2
FAM83H	0	1	0	0	1	1

FAM86B1	0	0	0	1	1	1
FAM86B2	0	0	0	1	1	1
FAM90A1	0	0	0	3	3	3
FAM98C	0	0	0	1	1	1
FAM9C	0	2	0	0	2	2
FAN1	0	1	0	0	1	1
FANCA	2	0	0	0	2	0
FANCD2	1	2	0	22	25	24
FANCE	0	0	0	1	1	1
FANCI	0	0	0	1	1	1
FANCL	0	0	0	4	4	4
FANCM	0	1	0	0	1	1
FARP2	0	1	0	1	2	2
FARSB	0	1	0	0	1	1
FASLG	0	0	0	2	2	2
FASTKD1	0	5	0	9	14	14
FASTKD3	0	0	0	1	1	1
FAT3	0	0	0	1	1	1
FAT4	0	0	0	1	1	1
FBF1	0	0	0	1	1	1
FBLIM1	0	0	0	1	1	1
FBLN1	0	0	0	1	1	1
FBLN2	0	1	2	7	10	8
FBLN7	0	0	0	1	1	1
FBN1	0	3	0	0	3	3
FBN2	3	0	0	0	3	0
FBP2	0	0	5	0	5	0
FBXL13	0	0	0	1	1	1
FBXL21	0	0	0	13	13	13
FBXO10	0	0	0	2	2	2
FBXO22	0	0	1	0	1	0
FBXO24	0	1	0	0	1	1
FBXO28	0	1	0	0	1	1
FBXO3	0	1	0	0	1	1
FBXO38	0	0	0	1	1	1
FBXW10	0	0	0	3	3	3
FBXW4	0	2	0	0	2	2
FBXW8	0	0	0	2	2	2
FCER2	2	0	0	1	3	1
FCGBP	1	1	0	2	4	3
FCGR1A	0	4	0	0	4	4
FCGR1B	0	0	0	3	3	3
FCGR2C	0	0	1	0	1	0
FCGR3A	0	0	0	1	1	1
FCHSD1	0	1	0	1	2	2

FCHSD2	0	0	12	4	16	4
FCN2	0	0	0	2	2	2
FCN3	2	0	0	8	10	8
FCRL1	0	1	0	0	1	1
FCRL2	0	0	0	1	1	1
FCRL3	0	2	0	0	2	2
FCRL5	0	0	0	1	1	1
FDFT1	0	1	0	0	1	1
FECH	1	0	0	1	2	1
FER1L5	1	0	0	0	1	0
FERMT1	0	0	0	18	18	18
FETUB	0	0	0	3	3	3
FGD1	0	0	0	3	3	3
FGD6	0	5	0	2	7	7
FGF19	0	3	0	0	3	3
FGF6	0	0	0	1	1	1
FGGY	3	0	0	1	4	1
FGL1	1	0	0	0	1	0
FH	0	0	0	2	2	2
FHDC1	0	0	0	1	1	1
FHOD1	0	0	0	1	1	1
FIG4	0	11	0	0	11	11
FIGNL1	0	0	0	2	2	2
FKBP14	0	0	1	1	2	1
FKBP15	0	0	0	1	1	1
FKBP2	0	0	0	1	1	1
FKTN	0	4	0	1	5	5
FLG	0	15	0	9	24	24
FLG2	0	1	0	6	7	7
FLI1	0	0	0	1	1	1
FLII	0	1	0	1	2	2
FLNA	3	0	0	3	6	3
FLNB	0	0	0	2	2	2
FLNC	0	0	0	2	2	2
FLOT2	0	0	0	2	2	2
FLRT2	0	0	0	2	2	2
FLT3	1	0	0	0	1	0
FLT3LG	0	0	0	1	1	1
FMNL2	0	7	0	0	7	7
FMO2	0	1	4	0	5	1
FMO4	0	0	0	2	2	2
FMO5	0	1	0	0	1	1
FNDC3B	0	0	0	2	2	2
FNDC4	0	0	0	1	1	1
FNDC7	0	2	0	0	2	2

FNDC9	0	0	0	1	1	1
FOLR1	4	0	0	0	4	0
FOLR3	0	2	0	0	2	2
FOLR4	1	0	0	0	1	0
FOXB2	0	0	0	1	1	1
FOXC2	0	0	0	1	1	1
FOXD4	0	0	0	4	4	4
FOXD4L5	0	0	0	1	1	1
FOXRED2	0	0	0	2	2	2
FRA10AC1	1	0	0	0	1	0
FRAS1	3	1	0	0	4	1
FREM1	0	0	0	5	5	5
FRG2B	0	0	0	3	3	3
FRG2C	0	1	0	9	10	10
FRMD4A	0	1	0	1	2	2
FRMPD2	1	0	0	9	10	9
FRMPD4	0	8	0	0	8	8
FRS3	0	0	0	2	2	2
FRY	0	0	0	4	4	4
FSCB	0	2	0	0	2	2
FSCN3	1	0	0	0	1	0
FSD2	0	1	0	0	1	1
FSIP1	0	1	0	0	1	1
FST	0	0	0	1	1	1
FSTL4	0	0	0	1	1	1
FTHL17	0	2	0	0	2	2
FTSJD2	0	3	0	0	3	3
FUBP1	5	0	0	0	5	0
FUCA1	1	0	0	0	1	0
FUS	0	0	0	2	2	2
FUT10	0	0	0	1	1	1
FUT6	0	1	0	0	1	1
FXC1	0	0	1	0	1	0
FXYD4	2	0	0	0	2	0
FYCO1	0	0	0	4	4	4
FZD1	0	0	0	3	3	3
FZD4	0	0	0	1	1	1
G0S2	0	0	1	0	1	0
G3BP1	0	3	0	1	4	4
GAB2	0	0	0	1	1	1
GAB4	1	0	0	0	1	0
GABBR1	0	0	0	1	1	1
GABPA	1	0	0	0	1	0
GABRB1	0	1	0	0	1	1
GABRB3	0	1	0	0	1	1

GAD1	0	12	0	0	12	12
GAK	0	0	0	1	1	1
GAL3ST2	3	0	0	0	3	0
GAL3ST3	0	1	0	0	1	1
GAL3ST4	0	1	0	0	1	1
GALC	0	1	0	0	1	1
GALNT1	0	0	0	1	1	1
GALNT14	0	1	0	1	2	2
GALNT2	0	0	0	1	1	1
GALNT3	0	0	0	1	1	1
GALNT6	0	0	0	1	1	1
GALNTL5	3	0	0	0	3	0
GALT	0	0	0	1	1	1
GANC	1	2	0	1	4	3
GAPVD1	0	0	0	2	2	2
GARNL3	0	0	0	4	4	4
GART	0	0	0	8	8	8
GAS2	0	0	0	2	2	2
GAS2L2	0	1	0	0	1	1
GATM	0	1	0	0	1	1
GBA2	0	1	0	0	1	1
GBAS	1	0	0	0	1	0
GBE1	1	0	0	0	1	0
GBF1	0	0	0	2	2	2
GBGT1	0	13	0	1	14	14
GBP3	1	3	0	0	4	3
GBP4	6	1	0	0	7	1
GBP5	1	3	0	2	6	5
GBP7	2	1	0	2	5	3
GCA	0	1	0	0	1	1
GCC2	0	16	0	0	16	16
GCKR	0	1	0	3	4	4
GCNT1	0	11	0	0	11	11
GCNT3	0	3	0	0	3	3
GCNT4	0	1	0	0	1	1
GCNT7	0	0	5	0	5	0
GDF3	0	0	0	2	2	2
GDF9	0	1	0	0	1	1
GDPD3	0	0	0	4	4	4
GDPD4	0	0	0	5	5	5
GEMIN4	0	1	0	0	1	1
GEMIN5	0	0	0	2	2	2
GFI1	7	0	0	0	7	0
GFM1	0	0	0	2	2	2
GFM2	0	0	0	1	1	1

GGCX	0	1	0	0	1	1
GGN	0	8	0	0	8	8
GGT1	8	1	0	0	9	1
GGT5	0	0	0	1	1	1
GH2	0	3	0	1	4	4
GHDC	0	0	1	0	1	0
GHITM	0	1	0	0	1	1
GHR	0	0	0	1	1	1
GHRHR	0	6	0	0	6	6
GHRL	0	0	0	1	1	1
GIMAP2	0	1	0	0	1	1
GIMAP6	1	0	0	0	1	0
GIMAP7	0	0	0	2	2	2
GIMAP8	0	0	0	2	2	2
GINS3	0	0	0	3	3	3
GJA1	0	0	0	6	6	6
GJA10	0	4	0	0	4	4
GJA3	0	0	0	2	2	2
GJA4	0	3	0	0	3	3
GJA8	0	0	0	2	2	2
GJA9	0	0	1	1	2	1
GJB2	0	1	0	4	5	5
GJB4	0	3	0	2	5	5
GJB7	0	0	0	3	3	3
GJD4	0	0	0	1	1	1
GKN2	1	0	0	0	1	0
GLB1L	0	1	0	0	1	1
GLB1L2	1	1	0	0	2	1
GLCE	0	0	0	1	1	1
GLDC	0	1	0	1	2	2
GLG1	0	0	0	1	1	1
GLI1	0	0	0	3	3	3
GLIPR1	0	1	0	1	2	2
GLIPR1L2	0	0	0	1	1	1
GLO1	0	0	0	1	1	1
GLRA3	0	0	0	10	10	10
GLRA4	0	1	0	0	1	1
GLS2	2	0	0	0	2	0
GLT1D1	0	3	0	0	3	3
GLT8D1	0	0	0	1	1	1
GLT8D2	0	0	0	1	1	1
GLTSCR2	0	0	0	1	1	1
GLUD2	0	1	0	1	2	2
GLYR1	0	0	0	17	17	17
GMEB2	0	0	0	4	4	4

GML	1	0	0	0	1	0
GMPR	0	0	0	5	5	5
GMPR2	0	0	0	1	1	1
GNAI3	0	3	0	3	6	6
GNAL	0	0	0	3	3	3
GNAT3	0	0	0	1	1	1
GNB1	0	2	0	0	2	2
GNB2	0	0	0	2	2	2
GNB5	0	1	0	0	1	1
GNL1	0	2	0	1	3	3
GNLY	2	3	0	2	7	5
GNPTAB	0	0	0	2	2	2
GNPTG	0	0	0	1	1	1
GNRH2	0	0	0	3	3	3
GNS	1	0	0	0	1	0
GOLGA1	0	0	0	2	2	2
GOLGA3	0	0	0	3	3	3
GOLGA6A	0	1	0	0	1	1
GOLGA6B	0	0	0	2	2	2
GOLGA6C	0	5	0	0	5	5
GOLGA8B	0	1	0	0	1	1
GOLGB1	0	2	0	0	2	2
GOLPH3L	0	0	0	1	1	1
GON4L	0	0	0	1	1	1
GOT1L1	0	0	0	21	21	21
GP1BA	0	1	0	0	1	1
GP2	1	0	0	0	1	0
GP6	0	0	0	12	12	12
GPATCH3	0	2	0	0	2	2
GPC4	0	0	0	1	1	1
GPC6	0	4	0	0	4	4
GPHN	0	0	0	7	7	7
GPLD1	0	0	0	5	5	5
GPN3	0	4	0	0	4	4
GPNMB	2	6	0	1	9	7
GPR108	0	0	0	1	1	1
GPR111	0	0	0	1	1	1
GPR112	0	0	0	2	2	2
GPR113	0	3	0	0	3	3
GPR114	0	0	0	1	1	1
GPR115	0	1	0	0	1	1
GPR116	0	0	1	0	1	0
GPR125	0	0	0	11	11	11
GPR128	0	0	0	9	9	9
GPR133	0	0	0	2	2	2

GPR135	0	0	0	1	1	1
GPR142	0	0	0	10	10	10
GPR149	0	2	0	0	2	2
GPR151	0	3	0	3	6	6
GPR155	0	1	0	0	1	1
GPR156	0	0	0	1	1	1
GPR17	0	1	0	0	1	1
GPR172B	0	0	0	1	1	1
GPR173	0	0	0	2	2	2
GPR179	0	1	0	1	2	2
GPR183	0	7	0	0	7	7
GPR4	0	0	0	1	1	1
GPR84	0	1	0	1	2	2
GPR87	0	0	0	1	1	1
GPR89A	0	0	0	2	2	2
GPR89B	0	0	0	2	2	2
GPR97	0	0	0	1	1	1
GPR98	1	1	0	2	4	3
GPRASP1	0	0	0	1	1	1
GPRC5A	0	0	0	4	4	4
GPRC5C	0	0	0	1	1	1
GPRC5D	0	0	0	5	5	5
GPRIN1	0	1	0	1	2	2
GPSM3	0	0	0	1	1	1
GRAMD1A	2	0	0	0	2	0
GRAMD1B	0	0	0	1	1	1
GRAMD2	0	0	0	3	3	3
GRAMD4	0	0	0	1	1	1
GRB7	0	0	0	1	1	1
GREB1	0	0	0	1	1	1
GRHL2	0	1	0	0	1	1
GRIA1	4	0	0	0	4	0
GRIK3	0	0	0	1	1	1
GRIN2B	0	1	0	0	1	1
GRIN3B	0	1	0	0	1	1
GRIP1	1	0	0	0	1	0
GRIP2	0	5	0	4	9	9
GRIPAP1	0	0	0	1	1	1
GRM2	0	0	0	1	1	1
GRM3	0	0	0	1	1	1
GRM5	0	1	0	0	1	1
GRN	0	0	0	1	1	1
GRXCR2	0	0	0	4	4	4
GSC	0	1	0	0	1	1
GSG1	0	7	0	0	7	7

GSG2	0	0	0	2	2	2
GSS	0	0	0	1	1	1
GSTA1	0	0	0	1	1	1
GSTA3	0	0	0	1	1	1
GSTA5	1	0	0	0	1	0
GSTM4	2	0	0	3	5	3
GSTO2	1	0	0	0	1	0
GSTT2	0	1	0	0	1	1
GTF2B	0	0	0	1	1	1
GTF2F1	2	0	0	0	2	0
GTF2H4	0	0	0	2	2	2
GTF2I	0	0	0	2	2	2
GTF2IRD2	0	1	0	0	1	1
GTF3C1	0	0	0	3	3	3
GTF3C5	0	0	0	1	1	1
GTPBP10	0	1	0	0	1	1
GTPBP5	0	0	0	1	1	1
GTPBP8	1	0	0	0	1	0
GTSE1	1	0	0	1	2	1
GUCA1C	0	7	0	0	7	7
GUCA2A	0	1	0	0	1	1
GUCY2C	0	1	0	0	1	1
GUCY2D	1	0	0	1	2	1
GUCY2F	1	0	0	5	6	5
GUF1	2	0	0	2	4	2
GUSB	0	1	0	0	1	1
GYG2	1	0	0	0	1	0
GYLTL1B	0	2	0	0	2	2
GZMA	0	1	0	0	1	1
GZMH	0	0	1	0	1	0
H2AFY2	0	0	0	1	1	1
H6PD	0	1	0	0	1	1
HAAO	0	1	0	0	1	1
HABP2	0	2	0	0	2	2
HACL1	0	0	0	1	1	1
HADH	0	0	0	1	1	1
HADHB	0	0	0	7	7	7
HAO1	0	1	0	0	1	1
HAO2	0	0	0	1	1	1
HAP1	0	4	0	0	4	4
HAPLN4	0	1	0	0	1	1
HAS2	0	0	0	1	1	1
HAUS1	0	1	0	0	1	1
HAUS3	0	1	0	1	2	2
HAUS4	1	0	0	0	1	0

HAVCR1	0	0	0	1	1	1
HAVCR2	0	0	0	1	1	1
HBB	0	1	0	0	1	1
HCAR3	0	0	0	4	4	4
HCFC1	0	0	0	1	1	1
HCN3	0	0	0	1	1	1
HCN4	0	4	0	0	4	4
HDAC1	0	0	0	2	2	2
HDAC4	0	0	0	1	1	1
HDGFRP3	14	0	0	0	14	0
HEATR1	3	1	0	0	4	1
HEATR7A	0	0	0	1	1	1
HEATR7B2	0	2	0	5	7	7
HEATR8	0	1	0	0	1	1
HECTD1	4	0	0	0	4	0
HECW1	0	0	0	1	1	1
HECW2	0	3	0	0	3	3
HEG1	0	0	0	1	1	1
HELB	0	0	0	21	21	21
HEPACAM2	0	7	0	0	7	7
HEPHL1	1	2	0	1	4	3
HERC1	0	0	0	2	2	2
HERC6	0	0	4	1	5	1
HERPUD1	0	0	0	1	1	1
HESX1	1	0	0	0	1	0
HEXA	0	0	0	1	1	1
HFM1	1	5	0	1	7	6
HGSNAT	0	1	0	0	1	1
HHATL	0	0	0	1	1	1
HHIP	13	0	0	0	13	0
HHIPL2	0	0	0	4	4	4
HHLA2	1	1	0	1	3	2
HIAT1	0	0	0	1	1	1
HIBCH	0	0	0	1	1	1
HIC1	0	0	0	1	1	1
HIGD1B	0	0	1	0	1	0
HINT3	0	1	0	0	1	1
HIP1R	0	0	0	1	1	1
HIPK1	0	1	0	0	1	1
HIPK3	0	0	0	1	1	1
HIST1H1T	0	1	0	1	2	2
HIST1H2AA	0	0	0	1	1	1
HIST1H2AB	0	0	0	1	1	1
HIST1H2AK	0	0	0	1	1	1
HIST1H2AL	0	0	0	1	1	1

HIST1H2BE	0	0	0	2	2	2
HIST1H2BG	0	1	0	0	1	1
HIST1H3A	0	1	0	0	1	1
HIST1H4B	0	4	0	0	4	4
HIST1H4D	0	0	0	1	1	1
HIST1H4K	0	0	0	1	1	1
HIST1H4L	0	0	0	1	1	1
HIST3H2BB	0	0	0	1	1	1
HIVEP2	0	0	0	1	1	1
HIVEP3	0	3	0	0	3	3
HJURP	1	0	0	0	1	0
HK3	0	1	0	0	1	1
HKDC1	0	1	0	1	2	2
HKR1	0	2	0	1	3	3
HLA-A	0	0	0	1	1	1
HLA-B	0	0	0	68	68	68
HLA-DPA1	0	1	0	0	1	1
HLA-DQB1	0	1	0	6	7	7
HLA-DRB1	5	0	0	45	50	45
HLA-G	0	0	0	12	12	12
HLCS	0	0	0	1	1	1
HLX	0	0	0	1	1	1
HMCN1	0	0	0	1	1	1
HMGXB3	0	0	0	4	4	4
HMMR	0	6	0	0	6	6
HNF1A	0	0	0	5	5	5
HNRNPA1L2	0	0	0	8	8	8
HNRNPD	1	0	0	0	1	0
HNRPLL	1	0	0	0	1	0
HOMER2	0	1	0	0	1	1
HOOK2	0	0	0	1	1	1
HOOK3	0	1	0	0	1	1
HORMAD1	0	6	0	0	6	6
HORMAD2	1	0	0	0	1	0
HOXA1	0	0	0	2	2	2
HOXA10	1	0	0	0	1	0
HOXA11	0	0	0	2	2	2
HOXA6	0	0	0	9	9	9
HPGD	0	0	0	1	1	1
HPS4	0	0	0	1	1	1
HPSE	0	3	0	0	3	3
HPSE2	0	0	0	1	1	1
HRASLS	0	1	0	0	1	1
HRNR	0	4	0	0	4	4
HS6ST1	0	1	0	0	1	1

HS6ST2	0	0	0	4	4	4
HSD11B2	0	0	0	1	1	1
HSD17B13	0	1	0	9	10	10
HSD17B14	1	1	0	2	4	3
HSD17B2	0	0	3	0	3	0
HSD17B4	0	0	0	3	3	3
HSF2	0	0	0	1	1	1
HSF4	0	0	0	1	1	1
HSH2D	0	1	0	2	3	3
HSP90B1	1	0	0	0	1	0
HSPA13	0	0	0	1	1	1
HSPA6	0	5	0	0	5	5
HSPA9	0	0	0	1	1	1
HSPG2	1	0	0	4	5	4
HTN3	0	3	0	0	3	3
HTR1A	0	0	0	1	1	1
HTR1E	0	0	0	1	1	1
HTR3A	1	0	0	0	1	0
HTR3E	0	1	0	0	1	1
HTRA4	1	0	0	0	1	0
HYDIN	1	5	0	2	8	7
IBSP	0	0	0	5	5	5
ICK	0	1	0	0	1	1
IDH3A	1	0	0	0	1	0
IDH3G	0	0	0	1	1	1
IDI2	0	0	11	1	12	1
IFI27L1	1	0	0	0	1	0
IFI35	0	0	0	1	1	1
IFI44	0	1	0	0	1	1
IFI44L	0	3	0	0	3	3
IFIH1	11	4	0	1	16	5
IFIT1	0	1	0	0	1	1
IFIT3	0	1	0	2	3	3
IFLTD1	0	1	0	0	1	1
IFNA10	0	1	0	1	2	2
IFNA5	0	4	0	0	4	4
IFNA6	0	1	0	0	1	1
IFNAR1	0	0	0	1	1	1
IFNB1	0	1	0	0	1	1
IFNE	0	5	0	0	5	5
IFNK	0	0	0	19	19	19
IFNW1	0	0	0	1	1	1
IFT122	0	1	0	1	2	2
IFT140	0	0	0	1	1	1
IFT172	2	0	0	0	2	0

IFT43	1	0	0	0	1	0
IFT74	3	0	0	0	3	0
IFT80	0	0	0	1	1	1
IGDCC3	0	0	0	2	2	2
IGDCC4	0	4	0	1	5	5
IGF2BP2	0	0	3	0	3	0
IGFBP1	0	0	0	1	1	1
IGFBPL1	0	0	0	2	2	2
IGFLR1	0	0	0	4	4	4
IGHMBP2	0	0	0	3	3	3
IGLL1	0	0	0	2	2	2
IGSF1	0	0	0	1	1	1
IGSF10	0	3	0	4	7	7
IGSF22	4	1	0	0	5	1
IGSF3	0	0	0	5	5	5
IKBKAP	0	1	0	5	6	6
IKBKE	1	0	0	0	1	0
IKZF2	0	4	0	0	4	4
IKZF4	0	0	0	2	2	2
IL12B	0	0	0	1	1	1
IL12RB1	0	1	0	0	1	1
IL17RB	2	0	0	1	3	1
IL18RAP	0	0	0	2	2	2
IL19	1	0	0	0	1	0
IL1R1	0	0	0	5	5	5
IL20	1	0	0	3	4	3
IL21R	0	0	0	1	1	1
IL23R	0	0	0	1	1	1
IL28A	0	1	0	0	1	1
IL4R	0	0	0	1	1	1
IL6ST	0	0	0	1	1	1
IL8	0	4	0	0	4	4
IL9	0	0	0	1	1	1
ILVBL	0	1	0	0	1	1
IMMT	0	1	0	0	1	1
IMP3	0	0	1	0	1	0
IMP5	0	1	0	0	1	1
IMPA1	5	0	0	0	5	0
IMPA2	0	6	0	0	6	6
INADL	0	1	0	1	2	2
INCA1	0	5	0	1	6	6
INCENP	0	0	0	3	3	3
INHBC	0	0	0	3	3	3
INMT	0	2	16	0	18	2
INPP1	3	0	0	0	3	0

INPP4B	0	1	0	0	1	1
INPP5D	0	1	0	0	1	1
INPP5J	1	1	0	0	2	1
INPP5K	0	0	0	1	1	1
INPPL1	0	0	0	1	1	1
INSC	0	4	0	1	5	5
INSR	0	0	0	1	1	1
INSRR	1	1	0	2	4	3
INTS1	0	0	0	1	1	1
INTS3	0	7	0	0	7	7
INTU	0	0	0	1	1	1
IP6K2	0	1	0	0	1	1
IPO11	1	0	0	0	1	0
IPO13	0	0	0	2	2	2
IPO5	3	2	0	0	5	2
IPO7	0	0	0	3	3	3
IPO8	0	1	0	0	1	1
IQCA1	0	0	0	1	1	1
IQCE	1	0	0	4	5	4
IQCF1	0	1	1	0	2	1
IQCF3	0	9	0	0	9	9
IQCG	0	1	0	0	1	1
IQCH	0	2	0	0	2	2
IQGAP1	0	0	0	12	12	12
IQGAP2	0	1	0	0	1	1
IQGAP3	2	0	0	1	3	1
IRAK3	3	0	0	0	3	0
IRAK4	0	1	0	0	1	1
IRS1	0	0	0	3	3	3
IRS2	0	1	0	0	1	1
IRS4	0	0	0	1	1	1
IRX1	0	0	0	2	2	2
IRX3	0	0	0	1	1	1
IRX4	0	0	0	1	1	1
ISCU	0	0	0	1	1	1
ISM2	0	2	0	0	2	2
ISX	1	0	0	0	1	0
ISYNA1	0	1	0	0	1	1
ITGA1	0	0	0	1	1	1
ITGA10	0	1	0	1	2	2
ITGA2	2	0	0	0	2	0
ITGA2B	0	0	0	1	1	1
ITGA4	0	0	0	1	1	1
ITGA5	0	8	0	0	8	8
ITGA6	0	1	0	0	1	1

ITGAD	0	1	0	0	1	1
ITGAE	2	0	0	0	2	0
ITGAL	3	0	0	0	3	0
ITGAV	0	2	0	0	2	2
ITGB1BP2	0	1	0	0	1	1
ITGB3	0	0	0	2	2	2
ITGB3BP	0	0	0	1	1	1
ITGB6	1	2	0	1	4	3
ITGB7	0	0	0	1	1	1
ITGB8	0	1	0	0	1	1
ITIH1	0	2	0	1	3	3
ITIH2	1	0	0	0	1	0
ITIH6	14	0	0	1	15	1
ITM2A	0	0	0	1	1	1
ITPKC	2	0	0	0	2	0
ITPR3	1	0	0	1	2	1
ITPRIPL1	0	2	0	0	2	2
ITSN1	0	0	0	8	8	8
ITSN2	4	0	0	0	4	0
JAKMIP1	0	1	0	0	1	1
JAKMIP3	0	0	0	2	2	2
JMJD4	1	0	0	0	1	0
JUP	0	0	0	5	5	5
KAAG1	0	1	0	0	1	1
KAL1	0	1	0	0	1	1
KANK1	0	1	0	0	1	1
KANK2	0	0	0	1	1	1
KANK4	5	0	0	0	5	0
KAT2A	0	0	0	1	1	1
KAT6A	0	2	0	0	2	2
KAT7	0	1	0	1	2	2
KATNA1	0	0	1	0	1	0
KATNAL2	0	1	0	0	1	1
KAZN	0	1	0	0	1	1
KBTBD12	0	1	0	1	2	2
KBTBD3	0	0	0	1	1	1
KBTBD7	0	0	0	2	2	2
KCMF1	0	0	0	2	2	2
KCNA1	0	0	0	2	2	2
KCNA3	0	0	0	1	1	1
KCNA6	0	0	0	1	1	1
KCNAB3	1	1	0	0	2	1
KCND1	0	0	0	1	1	1
KCND2	0	3	0	0	3	3
KCNE1L	0	6	0	0	6	6

KCNE2	0	0	0	1	1	1
KCNH1	1	0	0	0	1	0
KCNH3	0	0	0	2	2	2
KCNIP2	0	1	0	0	1	1
KCNJ11	0	0	0	1	1	1
KCNJ15	0	1	0	1	2	2
KCNJ18	0	0	0	1	1	1
KCNK1	0	2	0	0	2	2
KCNK16	0	3	0	1	4	4
KCNK18	0	0	0	1	1	1
KCNK4	3	0	0	0	3	0
KCNK5	0	0	0	1	1	1
KCNMA1	0	0	0	2	2	2
KCNMB1	0	0	0	1	1	1
KCNQ4	0	0	0	1	1	1
KCNQ5	0	2	0	0	2	2
KCNRG	0	0	0	2	2	2
KCNT1	0	0	0	1	1	1
KCNT2	0	7	0	0	7	7
KCNU1	0	0	0	1	1	1
KCTD11	0	0	0	1	1	1
KCTD12	0	0	1	0	1	0
KCTD17	1	0	0	0	1	0
KCTD18	0	0	0	8	8	8
KDELC1	0	0	0	1	1	1
KDELR3	0	0	0	1	1	1
KDM1B	0	2	0	0	2	2
KDM2B	0	0	0	2	2	2
KDM3A	0	2	0	1	3	3
KDM3B	0	0	0	1	1	1
KDM5C	0	2	0	2	4	4
KDM6A	0	0	0	5	5	5
KEAP1	0	0	0	1	1	1
KEL	0	0	0	1	1	1
KHDC1	0	0	0	2	2	2
KIAA0020	1	0	0	0	1	0
KIAA0090	1	0	0	0	1	0
KIAA0146	0	0	0	1	1	1
KIAA0182	0	1	0	0	1	1
KIAA0195	0	0	0	4	4	4
KIAA0196	0	1	0	0	1	1
KIAA0319	0	0	0	1	1	1
KIAA0368	0	0	0	1	1	1
KIAA0408	0	1	0	1	2	2
KIAA0415	1	0	0	0	1	0

KIAA0430	0	0	0	1	1	1
KIAA0513	0	12	0	0	12	12
KIAA0528	1	16	0	0	17	16
KIAA0556	0	0	0	1	1	1
KIAA0564	1	2	0	2	5	4
KIAA0586	1	0	0	4	5	4
KIAA0664	0	0	0	1	1	1
KIAA0753	0	2	0	1	3	3
KIAA0895	0	0	0	5	5	5
KIAA0907	0	0	0	3	3	3
KIAA0913	0	0	0	6	6	6
KIAA0922	1	0	0	0	1	0
KIAA1199	0	0	0	1	1	1
KIAA1211	0	0	0	2	2	2
KIAA1239	0	7	0	0	7	7
KIAA1257	0	0	0	2	2	2
KIAA1279	0	1	0	0	1	1
KIAA1324L	0	0	0	2	2	2
KIAA1370	0	0	0	2	2	2
KIAA1407	0	0	0	20	20	20
KIAA1429	2	1	0	0	3	1
KIAA1530	0	0	0	1	1	1
KIAA1549	0	0	0	2	2	2
KIAA1586	0	0	0	2	2	2
KIAA1609	1	0	0	0	1	0
KIAA1614	0	0	0	2	2	2
KIAA1731	0	0	0	1	1	1
KIAA1755	1	13	0	0	14	13
KIAA1797	1	0	0	0	1	0
KIAA1841	0	1	0	1	2	2
KIAA1958	0	0	0	4	4	4
KIAA2018	0	0	0	2	2	2
KIF12	0	1	0	0	1	1
KIF15	0	1	0	0	1	1
KIF18A	0	1	0	0	1	1
KIF18B	1	0	0	0	1	0
KIF1A	0	0	0	2	2	2
KIF1B	0	2	0	0	2	2
KIF20A	0	0	0	1	1	1
KIF20B	0	1	0	2	3	3
KIF24	1	3	0	1	5	4
KIF26B	0	0	0	4	4	4
KIF3A	0	1	0	0	1	1
KIF4A	2	0	0	0	2	0
KIF4B	0	0	0	1	1	1

KIF5A	0	0	0	4	4	4
KIF5C	7	0	0	0	7	0
KIF6	7	0	0	1	8	1
KIF7	0	1	0	0	1	1
KIFC3	0	0	0	1	1	1
KIR2DL1	0	2	0	8	10	10
KIR2DL4	0	0	0	10	10	10
KIR2DS4	1	0	0	14	15	14
KIR3DL1	0	2	0	0	2	2
KIR3DL2	0	0	0	1	1	1
KIRREL2	0	1	0	0	1	1
KIRREL3	0	0	0	1	1	1
KIT	0	0	0	2	2	2
KLHDC1	0	1	0	0	1	1
KLHDC4	0	1	0	0	1	1
KLHDC7A	0	3	0	0	3	3
KLHDC8B	0	0	0	1	1	1
KLHL1	0	0	0	1	1	1
KLHL13	0	0	0	1	1	1
KLHL25	0	0	0	1	1	1
KLHL29	0	0	0	5	5	5
KLHL32	2	2	0	0	4	2
KLHL38	0	0	0	2	2	2
KLK14	2	0	0	0	2	0
KLK3	0	0	1	0	1	0
KLK4	0	1	2	0	3	1
KLK7	0	0	0	1	1	1
KLKB1	0	0	0	2	2	2
KLRC2	0	0	0	3	3	3
KLRC3	3	0	0	0	3	0
KLRC4-KLRK1	1	0	0	0	1	0
KLRK1	0	0	0	1	1	1
KNG1	1	0	0	0	1	0
KNTC1	0	0	0	2	2	2
KPNA1	0	0	0	1	1	1
KPNA4	1	0	0	0	1	0
KPNA5	0	1	0	0	1	1
KPNA7	0	3	0	0	3	3
KPRP	0	0	1	2	3	2
KPTN	0	0	0	1	1	1
KRBA1	0	0	0	8	8	8
KRBA2	0	0	0	13	13	13
KRI1	0	0	0	1	1	1
KRT14	0	0	0	2	2	2
KRT15	0	1	0	1	2	2

KRT20	0	0	0	1	1	1
KRT222	0	1	0	1	2	2
KRT23	0	1	0	0	1	1
KRT24	0	1	0	0	1	1
KRT25	0	1	0	0	1	1
KRT27	1	0	0	0	1	0
KRT28	0	1	0	0	1	1
KRT31	18	0	0	0	18	0
KRT33A	0	0	0	1	1	1
KRT34	0	1	0	0	1	1
KRT35	1	1	0	0	2	1
KRT36	0	1	0	0	1	1
KRT38	0	4	0	1	5	5
KRT4	0	0	0	7	7	7
KRT6A	0	0	0	2	2	2
KRT6B	0	0	0	1	1	1
KRT6C	1	0	0	0	1	0
KRT71	0	0	0	1	1	1
KRT72	0	0	0	1	1	1
KRT74	2	0	0	0	2	0
KRT75	0	0	0	1	1	1
KRT76	0	10	0	0	10	10
KRT78	0	0	0	3	3	3
KRT79	0	0	0	2	2	2
KRT81	0	2	0	0	2	2
KRT82	0	3	0	0	3	3
KRT83	0	24	0	2	26	26
KRT85	0	1	0	0	1	1
KRT86	0	0	0	2	2	2
KRTAP1-1	0	1	0	3	4	4
KRTAP1-5	0	0	0	14	14	14
KRTAP10-11	0	0	0	1	1	1
KRTAP10-4	0	0	10	0	10	0
KRTAP10-6	0	0	0	14	14	14
KRTAP10-7	0	1	0	0	1	1
KRTAP10-8	0	1	0	0	1	1
KRTAP12-1	0	0	0	1	1	1
KRTAP13-1	0	4	1	2	7	6
KRTAP13-2	0	6	0	0	6	6
KRTAP15-1	0	13	0	0	13	13
KRTAP19-3	0	0	0	2	2	2
KRTAP21-2	0	2	0	0	2	2
KRTAP24-1	0	0	0	1	1	1
KRTAP27-1	0	1	0	1	2	2
KRTAP4-2	0	1	0	0	1	1

KRTAP4-5	0	1	0	0	1	1
KRTAP5-1	0	4	0	0	4	4
KRTAP5-10	0	0	0	1	1	1
KRTAP5-4	0	0	0	1	1	1
KRTAP6-2	0	0	0	3	3	3
KRTAP9-1	0	1	0	1	2	2
KSR1	0	0	0	1	1	1
L1TD1	0	0	0	8	8	8
LACC1	0	1	0	0	1	1
LACE1	0	0	0	2	2	2
LAD1	0	1	0	25	26	26
LAG3	0	0	0	1	1	1
LAIR2	0	18	0	0	18	18
LAMA2	1	0	0	2	3	2
LAMA4	0	0	0	1	1	1
LAMB1	4	2	0	1	7	3
LAMB2	0	1	0	0	1	1
LAMB3	0	2	0	1	3	3
LAMB4	2	0	0	7	9	7
LAMC3	1	0	0	0	1	0
LANCL2	0	1	0	0	1	1
LAPTM4B	0	0	0	1	1	1
LARGE	0	0	0	2	2	2
LARP1	0	0	0	1	1	1
LARP1B	0	0	0	1	1	1
LARP4	2	0	0	0	2	0
LARP4B	1	0	0	0	1	0
LARP7	0	0	0	2	2	2
LARS2	6	0	0	0	6	0
LAT	0	0	0	1	1	1
LAX1	0	0	0	1	1	1
LBP	0	1	0	0	1	1
LCA5L	0	0	0	1	1	1
LCE1D	0	0	18	0	18	0
LCE3C	0	0	0	1	1	1
LCE3E	0	0	0	1	1	1
LCE4A	0	3	0	0	3	3
LCN2	1	0	0	0	1	0
LCORL	0	0	0	1	1	1
LCT	0	0	0	2	2	2
LDHB	0	0	0	1	1	1
LDHC	0	0	0	1	1	1
LDHD	0	1	0	0	1	1
LDLR	1	0	0	1	2	1
LDLRAD1	0	1	0	0	1	1

LDLRAP1	0	0	0	1	1	1
LECT1	0	1	0	0	1	1
LEFTY1	0	0	0	1	1	1
LEO1	0	0	0	1	1	1
LEPRE1	0	1	0	0	1	1
LETM2	0	1	0	1	2	2
LFNG	0	0	0	6	6	6
LGALS12	0	0	0	1	1	1
LGALS9B	0	0	0	1	1	1
LGI1	0	0	0	1	1	1
LGI2	0	0	0	1	1	1
LHFPL1	0	1	0	0	1	1
LHFPL2	0	0	0	1	1	1
LHX2	0	0	0	1	1	1
LHX5	0	0	0	1	1	1
LIG4	0	0	0	1	1	1
LILRA1	0	1	0	1	2	2
LILRA2	4	1	0	2	7	3
LILRA3	1	0	0	4	5	4
LILRA4	0	0	0	2	2	2
LILRA5	1	0	0	0	1	0
LILRA6	0	2	0	0	2	2
LILRB1	2	1	0	1	4	2
LILRB3	1	0	0	0	1	0
LILRB4	10	0	0	0	10	0
LIMA1	1	1	0	0	2	1
LIMCH1	0	3	0	0	3	3
LIMS1	5	1	0	0	6	1
LIMS2	0	0	0	1	1	1
LIMS3L	0	6	0	0	6	6
LINS	0	8	0	0	8	8
LIPC	0	0	0	3	3	3
LIPE	0	0	0	1	1	1
LIPJ	14	0	0	0	14	0
LIPT1	0	0	0	2	2	2
LLGL1	0	1	0	0	1	1
LLGL2	1	0	0	0	1	0
LLPH	0	0	0	1	1	1
LMAN2	0	0	0	1	1	1
LMBRD1	0	0	0	4	4	4
LMBRD2	0	1	0	0	1	1
LMF1	0	0	0	1	1	1
LMNB1	1	0	0	0	1	0
LMO7	7	0	0	4	11	4
LMTK3	0	0	0	1	1	1

LNx1	0	1	0	0	1	1
LOC100132247	0	0	0	1	1	1
LOC100293516	0	1	0	0	1	1
LOC100507203	0	0	0	1	1	1
LOC100509575	0	6	0	0	6	6
LOC120824	0	0	0	1	1	1
LOC388946	0	0	0	1	1	1
LOC399939	2	0	0	0	2	0
LOC440563	0	1	0	0	1	1
LOC649330	0	0	0	3	3	3
LOC729020	0	3	0	0	3	3
LOH12CR1	0	0	0	1	1	1
LONP2	1	3	0	0	4	3
LOXHD1	0	0	0	1	1	1
LOXL3	0	0	0	1	1	1
LOXL4	0	0	0	4	4	4
LPA	4	3	0	1	8	4
LPHN1	0	0	0	1	1	1
LPHN2	0	0	0	1	1	1
LPIN1	4	0	0	0	4	0
LPIN2	0	0	0	1	1	1
LPIN3	0	1	0	1	2	2
LPO	0	0	0	2	2	2
LRCH3	0	2	0	0	2	2
LRCH4	0	0	0	3	3	3
LRGUK	2	0	0	0	2	0
LRIF1	0	0	0	1	1	1
LRIG1	0	7	0	1	8	8
LRMP	0	0	0	1	1	1
LRP1	0	0	0	7	7	7
LRP1B	11	1	0	0	12	1
LRP2	0	0	0	4	4	4
LRP5	0	1	0	0	1	1
LRP5L	0	2	0	0	2	2
LRP8	0	0	0	1	1	1
LRR1	0	1	0	1	2	2
LRR10	0	0	0	1	1	1
LRR16B	4	1	0	1	6	2
LRR19	0	0	0	1	1	1
LRR3	0	2	0	0	2	2
LRR30	0	0	0	1	1	1
LRR31	1	0	0	1	2	1
LRR34	0	2	0	2	4	4
LRR37A	0	0	0	1	1	1
LRR37A3	0	0	0	1	1	1

LRRRC39	0	1	0	0	1	1
LRRRC42	1	0	0	0	1	0
LRRRC46	3	0	0	2	5	2
LRRRC48	0	0	0	1	1	1
LRRRC52	0	1	0	0	1	1
LRRRC55	0	1	0	0	1	1
LRRRC56	0	0	0	1	1	1
LRRRC69	0	0	0	3	3	3
LRRRC70	0	1	0	0	1	1
LRRRC71	1	0	0	0	1	0
LRRRC8A	0	1	0	0	1	1
LRRRC8B	0	0	0	1	1	1
LRRRC8C	0	1	0	0	1	1
LRRRC8E	0	0	0	2	2	2
LRRCC1	0	0	1	2	3	2
LRRFIP2	0	0	0	1	1	1
LRRIQ1	0	2	0	1	3	3
LRRIQ3	2	0	0	0	2	0
LRRN2	0	5	0	0	5	5
LRTM1	0	2	0	1	3	3
LSM14A	0	0	0	2	2	2
LSR	0	0	0	1	1	1
LTBP2	0	3	0	0	3	3
LTF	0	0	0	1	1	1
LTK	0	5	0	2	7	7
LUM	0	0	0	1	1	1
LUZP4	0	0	0	1	1	1
LY6G5C	0	0	0	1	1	1
LY75	1	0	0	0	1	0
LY75-CD302	0	2	0	2	4	4
LYPD3	1	0	0	0	1	0
LYRM2	0	1	0	0	1	1
LYSMD1	1	0	0	0	1	0
LYST	0	7	0	0	7	7
LYVE1	0	1	0	0	1	1
LZTR1	1	0	0	0	1	0
LZTS2	0	0	0	1	1	1
MAB21L3	0	1	0	1	2	2
MACF1	0	2	0	2	4	4
MAD2L2	0	0	0	2	2	2
MADD	5	1	0	0	6	1
MAGEA10	0	0	0	1	1	1
MAGEA11	0	0	0	2	2	2
MAGEA3	0	2	0	0	2	2
MAGEA4	0	0	0	1	1	1

MAGEB16	0	0	0	1	1	1
MAGEC1	0	2	0	0	2	2
MAGEC3	0	1	0	3	4	4
MAGEE2	0	0	0	2	2	2
MAGEF1	0	0	0	2	2	2
MAK16	0	0	0	4	4	4
MAMDC2	1	0	0	0	1	0
MAMSTR	0	0	0	3	3	3
MAN1B1	0	0	0	1	1	1
MAN2A2	1	0	0	2	3	2
MAN2B1	1	0	0	0	1	0
MAN2B2	0	0	0	4	4	4
MAN2C1	0	0	0	1	1	1
MAP1B	0	0	0	1	1	1
MAP3K1	0	0	0	1	1	1
MAP3K11	0	0	0	2	2	2
MAP3K12	0	0	0	1	1	1
MAP3K15	0	7	0	1	8	8
MAP3K3	0	2	0	0	2	2
MAP3K5	5	1	0	9	15	10
MAP3K6	1	4	0	0	5	4
MAP4K2	0	0	0	1	1	1
MAP7	0	0	0	1	1	1
MAP7D1	0	0	0	1	1	1
MAP7D3	0	2	0	0	2	2
MAPK1	0	0	0	1	1	1
MAPK13	0	1	0	0	1	1
MAPK15	1	0	0	2	3	2
MAPK1IP1L	0	0	0	4	4	4
MAPKAP1	0	0	0	1	1	1
MAPKAPK5	0	6	0	0	6	6
MAPKBP1	0	1	0	0	1	1
MAPRE3	0	0	0	4	4	4
Mar-04	0	0	0	1	1	1
Mar-10	0	2	0	0	2	2
MARCO	0	1	0	0	1	1
MARK3	0	3	0	0	3	3
MARS2	0	0	0	1	1	1
MASP2	2	0	0	0	2	0
MAST1	2	0	0	0	2	0
MAST2	0	0	0	3	3	3
MAST3	0	0	0	2	2	2
MAST4	0	0	0	3	3	3
MASTL	1	0	0	0	1	0
MATK	0	2	0	0	2	2

MATN4	0	2	0	0	2	2
MATR3	5	0	0	0	5	0
MAU2	0	0	0	1	1	1
MB21D2	0	0	0	2	2	2
MBD3	0	0	0	1	1	1
MBD4	1	0	0	3	4	3
MBNL3	0	0	2	0	2	0
MC1R	0	0	0	1	1	1
MC5R	0	0	0	1	1	1
MCAM	0	0	0	1	1	1
MCC	0	1	0	1	2	2
MCCC1	0	0	0	1	1	1
MCEE	0	1	0	0	1	1
MCF2	0	0	0	1	1	1
MCF2L	0	0	0	2	2	2
MCF2L2	0	2	0	0	2	2
MCHR1	0	0	0	1	1	1
MCM2	0	0	0	1	1	1
MCM3	0	4	0	0	4	4
MCM3AP	0	0	0	2	2	2
MCM5	7	0	0	1	8	1
MCM8	0	0	0	1	1	1
MCM9	0	0	0	1	1	1
MCOLN1	1	0	0	0	1	0
MCTP1	0	10	0	0	10	10
MCTP2	0	1	0	0	1	1
MCU	0	0	1	0	1	0
MDC1	0	0	0	4	4	4
MDH1	0	0	0	1	1	1
MDN1	0	0	0	1	1	1
ME1	5	0	0	0	5	0
ME2	0	1	0	0	1	1
MECP2	0	0	0	1	1	1
MED12	2	0	0	3	5	3
MED12L	0	0	0	4	4	4
MED13	0	0	0	1	1	1
MED13L	0	1	0	0	1	1
MED17	0	1	0	1	2	2
MED22	0	0	0	1	1	1
MED23	0	5	0	0	5	5
MED25	0	0	0	1	1	1
MED31	0	0	0	1	1	1
MED4	0	1	0	0	1	1
MEF2B	0	0	0	1	1	1
MEGF10	7	1	0	0	8	1

MEGF8	0	0	0	1	1	1
MEI1	0	12	0	0	12	12
MEOX1	2	1	0	0	3	1
MEOX2	0	0	0	2	2	2
MEP1B	0	3	0	0	3	3
MEPE	0	0	0	5	5	5
MET	0	0	0	6	6	6
METAP1D	1	0	0	0	1	0
METTL1	8	0	0	0	8	0
METTL13	0	1	0	0	1	1
METTL17	0	1	0	0	1	1
METTL18	0	0	0	1	1	1
METTL20	2	1	0	0	3	1
METTL21A	0	0	1	0	1	0
METTL2A	0	3	0	0	3	3
METTL3	0	1	0	0	1	1
METTL7A	0	0	0	1	1	1
METTL7B	0	2	0	0	2	2
MFHAS1	0	3	0	1	4	4
MFN1	0	0	0	1	1	1
MFNG	1	0	0	2	3	2
MFSD4	1	0	0	0	1	0
MFSD5	0	7	0	1	8	8
MFSD6	0	1	0	0	1	1
MFSD6L	0	1	0	2	3	3
MFSD9	0	1	0	0	1	1
MGAM	0	0	0	1	1	1
MGAT4A	0	0	0	1	1	1
MGST2	0	2	0	0	2	2
MIA2	0	0	0	1	1	1
MIA3	0	0	0	2	2	2
MIB1	0	0	0	1	1	1
MICA	13	0	0	26	39	26
MICAL2	16	0	0	0	16	0
MICALCL	0	0	0	2	2	2
MICB	0	2	0	1	3	3
MID1	9	0	0	1	10	1
MID1IP1	0	0	0	3	3	3
MIEN1	0	0	0	1	1	1
MIF4GD	0	1	0	0	1	1
MILR1	0	0	0	1	1	1
MINK1	0	1	0	2	3	3
MIS18BP1	0	0	0	4	4	4
MKI67	0	1	0	1	2	2
MKI67IP	0	0	0	4	4	4

MKNK1	0	0	0	1	1	1
MKNK2	0	0	0	1	1	1
MKRN2	0	0	0	2	2	2
MLF1	0	0	0	1	1	1
MLF2	0	0	1	0	1	0
MLH1	0	0	0	6	6	6
MLH3	0	0	0	1	1	1
MLKL	0	1	0	5	6	6
MLL	15	2	0	1	18	3
MLL2	0	0	0	1	1	1
MLL3	1	0	0	0	1	0
MLL4	0	0	0	14	14	14
MLLT10	0	0	0	1	1	1
MLLT6	0	0	0	1	1	1
MLNR	0	0	0	7	7	7
MLPH	0	0	0	2	2	2
MMAA	0	3	0	1	4	4
MMAB	0	1	0	0	1	1
MMACHC	0	0	0	2	2	2
MME	1	1	0	13	15	14
MMEL1	0	1	0	0	1	1
MMP1	1	1	0	14	16	15
MMP10	17	2	0	0	19	2
MMP12	0	0	0	9	9	9
MMP15	0	3	0	0	3	3
MMP19	1	1	0	0	2	1
MMP20	1	0	0	1	2	1
MMP27	0	2	0	0	2	2
MMP3	0	0	0	1	1	1
MMP8	2	7	0	0	9	7
MMRN1	0	1	0	0	1	1
MMS19	1	0	0	1	2	1
MMS22L	0	0	0	14	14	14
MNDA	0	1	0	0	1	1
MNS1	0	0	0	11	11	11
MOB1B	0	0	0	1	1	1
MOCOS	1	0	0	2	3	2
MOCS1	0	0	0	1	1	1
MOCS2	0	1	0	0	1	1
MOGAT1	1	0	0	14	15	14
MOGAT2	0	0	0	1	1	1
MOGS	0	0	0	2	2	2
MOK	0	18	0	1	19	19
MON1B	1	0	0	0	1	0
MON2	1	0	0	0	1	0

MORN3	0	0	0	1	1	1
MOS	0	1	0	0	1	1
MOSC1	0	1	0	0	1	1
MOV10	2	0	0	3	5	3
MPHOSPH9	0	0	0	2	2	2
MPL	1	0	0	0	1	0
MPO	2	0	0	0	2	0
MPP1	2	3	0	0	5	3
MPPE1	0	0	0	2	2	2
MPV17L2	0	0	0	1	1	1
MPZL2	0	0	0	1	1	1
MPZL3	0	0	0	1	1	1
MRAS	2	0	0	0	2	0
MRC2	0	0	0	1	1	1
MRGPRX3	0	8	0	0	8	8
MRGPRX4	0	0	0	1	1	1
MRM1	0	1	0	0	1	1
MRO	0	0	0	9	9	9
MRPL1	0	1	0	0	1	1
MRPL14	0	0	0	1	1	1
MRPL2	0	0	0	1	1	1
MRPL20	1	0	0	0	1	0
MRPL28	0	1	0	0	1	1
MRPL32	0	2	0	0	2	2
MRPL46	0	1	0	1	2	2
MRPL50	0	0	0	1	1	1
MRPS18C	1	0	0	0	1	0
MRPS2	0	1	0	0	1	1
MRPS27	0	0	13	0	13	0
MRPS33	0	1	0	0	1	1
MRPS7	0	0	0	1	1	1
MRTO4	0	0	0	1	1	1
MS4A12	3	0	0	3	6	3
MS4A14	0	3	0	0	3	3
MS4A2	0	1	0	0	1	1
MS4A4A	0	0	0	1	1	1
MS4A5	0	1	0	0	1	1
MS4A6A	2	0	0	3	5	3
MSH4	0	1	0	0	1	1
MSH6	0	0	0	3	3	3
MSL2	0	1	0	0	1	1
MSLNL	0	1	0	1	2	2
MSMO1	0	2	0	0	2	2
MSR1	0	9	0	0	9	9
MSRB3	1	0	0	0	1	0

MST1	3	10	0	0	13	10
MST1R	0	0	0	2	2	2
MT1X	1	0	0	0	1	0
MTA2	0	16	0	0	16	16
MTCP1	0	1	0	0	1	1
MTERF	0	1	0	0	1	1
MTERFD3	0	0	0	1	1	1
MTF2	1	0	0	0	1	0
MTHFD1	0	1	0	0	1	1
MTHFD1L	0	1	0	0	1	1
MTHFR	0	1	0	2	3	3
MTIF2	0	0	0	2	2	2
MTL5	0	1	0	0	1	1
MTMR10	0	1	0	0	1	1
MTMR11	0	0	0	1	1	1
MTOR	0	1	0	0	1	1
MTRR	1	0	0	0	1	0
MTUS1	0	0	0	1	1	1
MUC1	0	0	0	1	1	1
MUC16	1	2	0	18	21	20
MUC17	1	5	0	3	9	8
MUC2	0	0	0	4	4	4
MUC20	17	0	0	0	17	0
MUC4	0	0	0	1	1	1
MUC5B	0	0	0	4	4	4
MUC6	0	0	0	23	23	23
MUC7	0	0	0	1	1	1
MUL1	0	0	0	1	1	1
MUM1	0	0	0	1	1	1
MUS81	0	0	0	1	1	1
MUSK	0	1	0	0	1	1
MVD	0	0	0	1	1	1
MVP	0	0	0	1	1	1
MX2	0	0	0	1	1	1
MXD3	0	0	0	1	1	1
MXI1	0	1	0	0	1	1
MXRA5	0	0	0	1	1	1
MYBBP1A	0	0	0	3	3	3
MYBPC2	0	1	0	2	3	3
MYBPHL	0	2	0	0	2	2
MYCBP2	0	0	0	4	4	4
MYCBPAP	0	0	0	11	11	11
MYEF2	6	0	0	0	6	0
MYEOV	1	0	0	1	2	1
MYH1	0	1	0	1	2	2

MYH10	0	1	0	1	2	2
MYH11	1	0	0	0	1	0
MYH13	0	0	0	2	2	2
MYH15	1	6	0	0	7	6
MYH3	0	10	0	1	11	11
MYH4	1	0	0	2	3	2
MYH7	0	1	0	1	2	2
MYH7B	0	1	0	2	3	3
MYH8	0	3	0	1	4	4
MYH9	0	17	0	2	19	19
MYL1	0	0	0	6	6	6
MYL7	0	1	0	0	1	1
MYLK	0	1	0	0	1	1
MYNN	0	2	0	0	2	2
MYO10	0	0	0	2	2	2
MYO15A	0	1	0	0	1	1
MYO16	0	1	0	0	1	1
MYO1A	0	1	0	0	1	1
MYO1C	0	1	0	0	1	1
MYO1F	0	1	0	0	1	1
MYO1H	1	0	0	1	2	1
MYO3B	1	1	0	0	2	1
MYO6	1	0	0	1	2	1
MYO7A	0	0	0	3	3	3
MYO7B	1	0	0	2	3	2
MYO9B	0	0	0	1	1	1
MYOC	0	2	0	0	2	2
MYOCD	0	0	0	1	1	1
MYOF	0	4	0	0	4	4
MYOM2	0	0	0	1	1	1
MYOM3	0	0	0	2	2	2
MYT1	0	1	0	4	5	5
MYT1L	0	3	0	0	3	3
MZB1	0	0	0	2	2	2
N4BP2L2	0	0	0	1	1	1
N4BP3	0	0	0	3	3	3
N6AMT1	1	0	0	0	1	0
NAA16	0	3	0	17	20	20
NAA20	0	2	0	0	2	2
NAAA	1	0	0	0	1	0
NAALADL2	0	1	0	0	1	1
NACA2	0	1	0	1	2	2
NACC2	0	0	0	1	1	1
NADK	0	0	0	1	1	1
NAF1	0	1	0	0	1	1

NAGLU	0	1	0	1	2	2
NAIP	0	0	0	1	1	1
NANOG	0	0	0	5	5	5
NAP1L1	2	0	0	0	2	0
NAP1L4	0	2	0	0	2	2
NARF	0	0	0	1	1	1
NAT1	0	2	0	0	2	2
NAT10	1	0	0	3	4	3
NAT2	0	1	0	0	1	1
NAT6	0	0	0	1	1	1
NAT8B	0	0	0	1	1	1
NBAS	0	2	0	1	3	3
NBEAL1	1	0	0	0	1	0
NBN	0	0	0	1	1	1
NBPF1	0	9	0	0	9	9
NBPF10	0	1	0	0	1	1
NBPF14	4	0	0	2	6	2
NBPF15	0	1	0	2	3	3
NBPF3	0	0	0	38	38	38
NBPF7	3	1	0	1	5	2
NBPF9	0	1	10	1	12	2
NCAM1	0	0	0	1	1	1
NCAPG2	0	0	0	1	1	1
NCAPH	0	0	0	1	1	1
NCBP1	0	4	0	0	4	4
NCF1	0	1	0	0	1	1
NCKIPSD	0	0	0	1	1	1
NCL	0	0	0	29	29	29
NCOA3	0	1	0	0	1	1
NCOA6	0	0	0	1	1	1
NCOR1	2	13	0	2	17	15
NCOR2	0	0	0	5	5	5
NCR1	0	0	0	1	1	1
NCS1	1	0	0	0	1	0
NDRG2	0	0	0	1	1	1
NDUFA4L2	0	0	0	2	2	2
NDUFA8	0	0	0	2	2	2
NDUFAF3	0	0	0	1	1	1
NDUFAF4	0	1	2	0	3	1
NDUFB10	0	0	0	1	1	1
NDUFB11	0	0	0	2	2	2
NDUFB3	0	1	0	0	1	1
NDUFS2	0	0	0	1	1	1
NDUFV3	1	0	0	1	2	1
NEB	0	1	0	1	2	2

NECAB2	0	6	0	1	7	7
NECAB3	0	0	0	1	1	1
NEDD8	0	0	0	2	2	2
NEFH	0	0	0	1	1	1
NEFM	0	0	0	1	1	1
NEIL1	5	0	0	0	5	0
NEIL3	0	0	0	1	1	1
NEK10	0	1	0	0	1	1
NEK11	1	0	0	0	1	0
NEK8	0	0	1	0	1	0
NEK9	1	2	0	0	3	2
NENF	0	1	0	0	1	1
NEO1	0	0	0	1	1	1
NES	0	2	0	1	3	3
NEU3	0	0	1	0	1	0
NEURL	0	0	0	8	8	8
NEURL2	0	0	0	1	1	1
NEURL4	0	0	0	1	1	1
NEUROD1	0	0	0	1	1	1
NEUROD6	0	1	0	0	1	1
NEUROG3	0	1	0	0	1	1
NEXN	1	0	0	1	2	1
NF1	0	0	0	1	1	1
NFATC3	0	0	0	14	14	14
NFKBIZ	0	0	0	1	1	1
NFXL1	1	0	0	0	1	0
NGDN	0	1	0	0	1	1
NGEF	0	0	0	1	1	1
NGLY1	0	1	0	0	1	1
NHLRC1	0	0	0	1	1	1
NID2	0	0	0	1	1	1
NIF3L1	0	0	0	2	2	2
NIN	0	7	0	0	7	7
NINL	0	0	0	1	1	1
NIPA2	0	0	0	4	4	4
NIPBL	2	0	0	10	12	10
NIPSNAP1	0	0	0	1	1	1
NIPSNAP3A	0	0	0	2	2	2
NISCH	0	0	0	4	4	4
NKAPL	0	0	0	3	3	3
NKTR	0	0	0	5	5	5
NKX1-2	0	0	0	3	3	3
NLGN4X	0	1	0	0	1	1
NLRC4	0	1	0	0	1	1
NLRP10	0	1	0	0	1	1

NLRP12	0	2	0	0	2	2
NLRP13	0	0	0	14	14	14
NLRP5	0	0	0	1	1	1
NLRP8	0	1	0	3	4	4
NLRX1	0	0	0	1	1	1
NME1	0	0	0	1	1	1
NMRAL1	0	1	0	1	2	2
NOBOX	0	0	0	1	1	1
NOC2L	0	0	0	2	2	2
NOC3L	0	1	0	1	2	2
NOD2	0	0	0	15	15	15
NOL10	0	3	0	1	4	4
NOL3	1	0	0	2	3	2
NOL6	0	2	0	0	2	2
NOMO2	0	0	0	7	7	7
NOMO3	0	1	0	1	2	2
NONO	0	0	0	1	1	1
NOP14	0	0	0	2	2	2
NOP58	0	1	0	0	1	1
NOS1	0	3	0	0	3	3
NOS2	0	0	0	1	1	1
NOSTRIN	0	0	0	1	1	1
NOTCH2	1	1	0	1	3	2
NOTCH2NL	0	3	0	0	3	3
NOX3	1	1	0	1	3	2
NOX4	0	0	0	1	1	1
NOX5	1	2	0	2	5	4
NPAS1	0	1	0	0	1	1
NPAT	0	9	0	1	10	10
NPC1	0	1	0	0	1	1
NPC1L1	1	0	0	0	1	0
NPC2	5	0	0	0	5	0
NPFFR1	6	0	0	0	6	0
NPFFR2	0	0	0	1	1	1
NPHP1	4	2	0	0	6	2
NPHP3	0	1	0	1	2	2
NPHS2	0	0	0	1	1	1
NPIP	0	0	0	1	1	1
NPM2	2	0	0	2	4	2
NPR1	0	0	0	15	15	15
NPVF	0	0	0	1	1	1
NPY2R	0	1	0	0	1	1
NQO1	1	0	0	2	3	2
NR2E3	1	0	0	1	2	1
NR2F1	0	0	0	1	1	1

NR3C1	0	1	0	0	1	1
NR4A2	0	0	0	2	2	2
NRAP	1	0	0	0	1	0
NRF1	0	0	0	1	1	1
NRG4	0	0	0	1	1	1
NRIP1	0	1	0	0	1	1
NRK	0	2	0	3	5	5
NRP1	0	0	0	1	1	1
NRP2	0	1	0	0	1	1
NRSN1	0	2	0	0	2	2
NRXN1	0	0	0	1	1	1
NRXN2	11	0	0	8	19	8
NSD1	4	0	0	1	5	1
NSF	0	0	0	3	3	3
NSMCE2	0	0	0	1	1	1
NSUN2	0	0	0	1	1	1
NSUN4	0	1	0	0	1	1
NSUN6	0	0	0	2	2	2
NT5C	0	1	0	0	1	1
NT5C1B	0	11	0	0	11	11
NT5DC2	0	0	0	1	1	1
NTM	0	0	0	1	1	1
NTPCR	4	0	0	0	4	0
NTRK1	0	0	0	1	1	1
NUAK2	1	0	0	0	1	0
NUB1	0	0	0	6	6	6
NUBP1	1	0	0	0	1	0
NUCB1	0	0	0	1	1	1
NUDT12	0	1	0	1	2	2
NUDT13	0	0	0	13	13	13
NUDT16L1	0	0	4	0	4	0
NUDT17	0	0	0	35	35	35
NUDT18	0	0	1	0	1	0
NUDT22	0	0	0	1	1	1
NUDT6	0	0	0	1	1	1
NUF2	3	0	0	0	3	0
NUMBL	0	0	0	1	1	1
NUP107	1	0	0	0	1	0
NUP133	0	0	0	1	1	1
NUP155	1	0	0	0	1	0
NUP210	1	1	0	0	2	1
NUP210L	0	0	0	1	1	1
NUP214	0	0	0	11	11	11
NUP98	0	0	0	2	2	2
NWD1	0	2	0	0	2	2

NXF3	1	0	0	1	2	1
OAS1	0	0	0	1	1	1
OAS2	0	1	0	0	1	1
OAS3	0	7	0	0	7	7
OASL	0	3	0	0	3	3
OAZ1	0	0	0	1	1	1
OAZ2	0	0	0	1	1	1
OBFC2B	0	2	0	0	2	2
OBP2B	0	0	0	1	1	1
OBSCN	1	2	0	0	3	2
OBSL1	0	3	0	0	3	3
OC90	0	0	0	1	1	1
OCIAD2	1	0	0	0	1	0
OCM	0	3	0	0	3	3
ODAM	0	0	0	1	1	1
ODF1	0	0	0	1	1	1
ODF3L1	0	2	0	1	3	3
ODF3L2	0	2	0	1	3	3
ODZ1	0	0	0	13	13	13
ODZ2	0	0	0	1	1	1
ODZ4	0	0	0	1	1	1
OFD1	0	7	0	0	7	7
OGFOD1	0	0	0	1	1	1
OGFRL1	0	0	0	2	2	2
OGG1	0	1	0	1	2	2
OIT3	0	0	0	14	14	14
OLFM4	0	6	0	10	16	16
OLFML2A	0	0	0	1	1	1
OLFML3	0	1	0	2	3	3
OLR1	0	1	0	0	1	1
OMP	0	1	0	0	1	1
OPA1	0	1	0	0	1	1
OPN3	18	0	0	0	18	0
OPN4	0	0	0	1	1	1
OPRD1	0	0	0	4	4	4
OPRK1	0	1	0	0	1	1
OPTC	0	0	0	1	1	1
OPTN	1	0	0	0	1	0
OR10A4	0	0	0	1	1	1
OR10A6	0	5	0	0	5	5
OR10A7	0	0	0	1	1	1
OR10AD1	0	1	0	4	5	5
OR10C1	0	11	0	0	11	11
OR10G2	0	0	0	1	1	1
OR10G7	0	1	0	0	1	1

OR10H4	0	1	0	1	2	2
OR10J3	0	0	0	1	1	1
OR10J5	0	0	18	0	18	0
OR10P1	0	0	0	4	4	4
OR10Q1	0	0	0	1	1	1
OR10R2	0	4	0	0	4	4
OR10S1	0	0	0	1	1	1
OR10V1	0	17	0	0	17	17
OR10Z1	0	1	0	0	1	1
OR11G2	0	0	0	1	1	1
OR11H1	0	0	0	2	2	2
OR11H12	0	0	0	1	1	1
OR11H2	0	0	0	1	1	1
OR11H4	0	0	0	1	1	1
OR11H6	0	0	0	2	2	2
OR13A1	0	1	0	2	3	3
OR13C4	0	0	0	1	1	1
OR13C5	0	1	0	18	19	19
OR13C8	0	1	0	0	1	1
OR13C9	0	0	0	4	4	4
OR13D1	0	1	0	1	2	2
OR13G1	0	0	0	1	1	1
OR13J1	0	0	0	1	1	1
OR14C36	0	1	0	0	1	1
OR1A2	0	0	0	1	1	1
OR1D5	0	0	0	3	3	3
OR1E2	0	0	0	10	10	10
OR1F1	0	11	0	0	11	11
OR1J1	0	11	0	1	12	12
OR1J2	0	1	0	2	3	3
OR1N2	0	0	0	11	11	11
OR1S1	0	1	0	1	2	2
OR1S2	0	10	0	1	11	11
OR2A2	0	0	0	1	1	1
OR2A5	0	1	0	0	1	1
OR2AG2	0	0	0	1	1	1
OR2B11	0	5	0	3	8	8
OR2B2	0	0	0	1	1	1
OR2C3	0	0	0	1	1	1
OR2D2	0	2	0	4	6	6
OR2F1	0	0	0	1	1	1
OR2G6	0	0	0	7	7	7
OR2L2	0	2	0	0	2	2
OR2L3	0	2	0	0	2	2
OR2M3	0	0	1	0	1	0

OR2S2	0	1	0	0	1	1
OR2T1	0	2	0	1	3	3
OR2T10	0	1	0	0	1	1
OR2T11	0	2	0	2	4	4
OR2T12	0	1	0	1	2	2
OR2T2	0	0	0	6	6	6
OR2T27	0	5	1	10	16	15
OR2T3	0	1	0	1	2	2
OR2T35	0	1	0	15	16	16
OR2T4	0	0	0	4	4	4
OR2T5	0	6	0	0	6	6
OR2T8	0	0	0	3	3	3
OR2W3	0	8	0	0	8	8
OR2W5	0	2	0	0	2	2
OR3A1	0	5	0	1	6	6
OR4A5	0	2	0	1	3	3
OR4C15	0	3	0	0	3	3
OR4C16	0	0	0	2	2	2
OR4C3	0	0	0	1	1	1
OR4C46	0	0	0	4	4	4
OR4D1	0	0	5	3	8	3
OR4D10	0	20	0	0	20	20
OR4D11	0	0	0	1	1	1
OR4D6	0	0	0	10	10	10
OR4F17	0	0	0	4	4	4
OR4F21	0	1	0	0	1	1
OR4F4	0	0	0	1	1	1
OR4F6	0	0	0	2	2	2
OR4L1	0	0	0	4	4	4
OR4M2	0	10	0	2	12	12
OR4N2	0	0	0	4	4	4
OR4N4	0	2	0	9	11	11
OR4Q3	0	3	0	0	3	3
OR4S2	0	2	0	0	2	2
OR51B2	0	0	0	1	1	1
OR51B5	0	1	0	0	1	1
OR51F1	0	1	0	0	1	1
OR51G1	0	2	0	8	10	10
OR51I1	0	16	0	0	16	16
OR51I2	0	0	0	13	13	13
OR51M1	0	1	0	0	1	1
OR51S1	0	1	0	0	1	1
OR51T1	0	0	0	4	4	4
OR51V1	0	0	0	2	2	2
OR52A1	0	0	0	1	1	1

OR52B2	0	0	0	3	3	3
OR52E6	0	0	0	1	1	1
OR52E8	0	1	0	0	1	1
OR52H1	0	1	0	0	1	1
OR52I2	0	0	0	5	5	5
OR52J3	0	6	0	0	6	6
OR52K1	0	2	0	2	4	4
OR52K2	0	20	0	2	22	22
OR52M1	0	0	0	4	4	4
OR52N1	0	0	0	1	1	1
OR52N2	0	0	0	1	1	1
OR52N4	0	1	0	0	1	1
OR52N5	0	0	0	1	1	1
OR52W1	0	0	0	1	1	1
OR56A3	0	1	0	0	1	1
OR56B1	0	0	0	1	1	1
OR5A2	0	1	0	0	1	1
OR5AC2	0	1	0	9	10	10
OR5AN1	0	0	0	1	1	1
OR5AR1	0	0	0	1	1	1
OR5B12	0	0	0	3	3	3
OR5B17	0	3	0	0	3	3
OR5D14	0	0	0	1	1	1
OR5D16	0	0	0	5	5	5
OR5H1	0	1	0	1	2	2
OR5H14	0	1	0	0	1	1
OR5H15	0	4	0	11	15	15
OR5H2	0	0	0	1	1	1
OR5L2	0	1	0	2	3	3
OR5M3	0	7	0	0	7	7
OR5M8	0	0	0	1	1	1
OR5P2	0	0	0	5	5	5
OR5R1	0	0	0	1	1	1
OR6A2	0	0	0	2	2	2
OR6C1	0	0	0	17	17	17
OR6C3	0	0	0	1	1	1
OR6C4	0	1	0	9	10	10
OR6C6	0	2	0	0	2	2
OR6C68	0	0	0	2	2	2
OR6C70	0	0	0	3	3	3
OR6C76	0	0	0	4	4	4
OR6F1	0	0	0	2	2	2
OR6K2	0	0	0	5	5	5
OR6Q1	0	0	0	1	1	1
OR7C1	0	0	0	1	1	1

OR7G1	0	0	0	6	6	6
OR7G3	0	7	0	0	7	7
OR8A1	0	0	0	2	2	2
OR8B3	0	0	0	15	15	15
OR8B4	0	0	0	1	1	1
OR8D4	0	1	0	2	3	3
OR8G1	0	0	0	4	4	4
OR8H2	0	0	0	1	1	1
OR8H3	0	0	0	1	1	1
OR8K3	0	11	0	0	11	11
OR8U1	0	0	0	1	1	1
OR8U8	0	1	0	0	1	1
OR9A4	0	0	0	1	1	1
OR9K2	0	1	0	10	11	11
OR9Q1	0	0	0	1	1	1
ORAI2	0	1	0	0	1	1
ORC1	0	0	0	1	1	1
ORC4	2	0	0	0	2	0
OSBP	0	15	0	0	15	15
OSBPL10	0	0	0	3	3	3
OSBPL1A	0	2	0	1	3	3
OSBPL7	0	0	0	1	1	1
OSGEP	0	1	0	0	1	1
OTOA	1	0	0	0	1	0
OTOF	0	0	0	2	2	2
OTOGL	1	16	0	0	17	16
OTOL1	1	0	0	0	1	0
OTOP2	0	0	0	1	1	1
OTOP3	0	1	0	0	1	1
OTUD4	4	0	0	0	4	0
OTUD6B	1	0	0	0	1	0
OVCH1	0	0	0	1	1	1
OVGP1	0	0	0	19	19	19
OVOL2	2	1	0	0	3	1
OXA1L	0	0	0	1	1	1
OXGR1	0	0	0	3	3	3
OXSM	0	0	6	0	6	0
P2RX2	0	0	0	1	1	1
P2RX5	0	2	0	0	2	2
P2RX6	0	3	0	0	3	3
P2RX7	4	0	0	0	4	0
P2RY11	0	1	0	1	2	2
P2RY13	0	0	0	2	2	2
P2RY4	0	16	0	0	16	16
P4HA2	0	0	0	1	1	1

PABPC1	0	2	0	6	8	8
PABPC3	0	0	0	34	34	34
PADI1	1	0	0	0	1	0
PADI2	1	2	0	0	3	2
PADI4	0	0	0	1	1	1
PADI6	0	0	0	1	1	1
PAF1	0	3	0	0	3	3
PAFAH1B1	1	0	0	0	1	0
PAFAH2	0	0	0	2	2	2
PAH	2	0	0	0	2	0
PALB2	0	1	0	3	4	4
PALLD	0	0	0	1	1	1
PANX1	0	1	0	0	1	1
PANX3	0	0	0	1	1	1
PAPD7	0	0	0	1	1	1
PAPLN	3	1	0	1	5	2
PAPOLB	0	0	0	1	1	1
PAPPA2	0	0	0	1	1	1
PAPSS1	0	1	0	0	1	1
PAQR6	0	0	0	1	1	1
PARD3	2	1	0	0	3	1
PARD6B	0	0	0	1	1	1
PARK7	0	0	0	2	2	2
PARP1	0	0	0	1	1	1
PARP11	0	0	0	1	1	1
PARP16	0	1	0	0	1	1
PARP2	0	1	0	0	1	1
PARP3	0	2	0	0	2	2
PARP4	3	0	0	1	4	1
PARP8	0	0	0	1	1	1
PASK	0	1	0	1	2	2
PATE1	0	1	0	0	1	1
PATE4	16	0	0	0	16	0
PATZ1	0	0	0	10	10	10
PAX6	0	0	0	1	1	1
PAX8	0	0	0	1	1	1
PBLD	0	0	0	6	6	6
PBX3	0	0	0	1	1	1
PBX4	0	1	0	0	1	1
PCCA	0	0	0	1	1	1
PCDH15	1	1	0	0	2	1
PCDH20	0	0	0	1	1	1
PCDHA11	0	0	0	2	2	2
PCDHA12	0	2	0	0	2	2
PCDHA13	0	0	0	4	4	4

PCDHA2	0	0	0	1	1	1
PCDHA3	0	0	0	12	12	12
PCDHA4	0	0	0	1	1	1
PCDHA9	0	1	0	0	1	1
PCDHAC1	0	1	0	0	1	1
PCDHB1	0	1	0	0	1	1
PCDHB10	0	1	0	2	3	3
PCDHB11	0	0	0	1	1	1
PCDHB13	0	0	0	1	1	1
PCDHB14	0	1	0	2	3	3
PCDHB16	0	0	0	1	1	1
PCDHB3	0	0	0	3	3	3
PCDHB4	0	0	0	3	3	3
PCDHB6	0	0	0	7	7	7
PCDHB7	0	9	0	1	10	10
PCDHB8	0	0	0	1	1	1
PCDHB9	0	0	0	1	1	1
PCDHGA11	0	0	0	8	8	8
PCDHGA2	0	1	0	1	2	2
PCDHGA3	0	1	0	1	2	2
PCDHGA5	0	0	0	1	1	1
PCDHGB1	0	0	0	1	1	1
PCDHGB3	0	0	0	2	2	2
PCDHGB6	0	0	0	1	1	1
PCDHGC5	0	1	0	1	2	2
PCGF1	0	0	0	9	9	9
PCIF1	0	0	0	1	1	1
PCK1	0	0	0	1	1	1
PCK2	1	4	0	3	8	7
PCNT	0	1	0	2	3	3
PCNX	0	0	0	1	1	1
PCNXL2	0	0	0	1	1	1
PCOLCE	0	0	0	2	2	2
PCOLCE2	0	1	0	0	1	1
PCSK1	0	1	0	0	1	1
PCSK4	0	1	0	0	1	1
PCSK5	0	0	0	1	1	1
PDAP1	0	0	0	8	8	8
PDCD11	2	1	0	0	3	1
PDCD1LG2	0	0	0	4	4	4
PDCD2L	1	0	0	0	1	0
PDCD5	0	1	0	0	1	1
PDCD6IP	1	0	0	1	2	1
PDE11A	1	6	0	3	10	9
PDE3B	0	4	0	0	4	4

PDE4B	0	1	0	1	2	2
PDE4DIP	1	1	0	1	3	2
PDE5A	0	3	0	0	3	3
PDE6B	0	0	0	1	1	1
PDGFRB	0	1	0	1	2	2
PDIA2	1	2	0	0	3	2
PDIA6	0	0	0	1	1	1
PDLIM2	0	0	0	1	1	1
PDP2	0	0	0	1	1	1
PDPR	0	1	0	0	1	1
PDSS2	0	0	0	14	14	14
PDX1	0	1	0	0	1	1
PDXDC1	0	0	0	1	1	1
PDZD2	0	0	0	4	4	4
PDZD3	0	0	0	1	1	1
PDZD7	0	0	0	2	2	2
PDZD9	0	0	0	2	2	2
PDZK1	0	0	0	1	1	1
PDZRN3	2	0	0	1	3	1
PEG3	0	0	0	1	1	1
PELI1	0	0	0	1	1	1
PELP1	0	0	0	1	1	1
PENK	0	0	0	2	2	2
PER1	0	1	0	1	2	2
PER2	0	2	0	1	3	3
PER3	6	0	0	0	6	0
PET112	0	1	0	0	1	1
PEX1	0	0	0	4	4	4
PEX11G	0	1	0	0	1	1
PEX12	0	0	0	1	1	1
PEX6	0	0	0	1	1	1
PFAS	0	1	0	1	2	2
PFKFB1	0	0	0	2	2	2
PFKFB4	0	0	0	1	1	1
PFKP	0	0	0	1	1	1
PGD	1	0	0	0	1	0
PGK1	0	0	0	1	1	1
PGK2	0	0	0	1	1	1
PGLYRP1	0	0	1	0	1	0
PGLYRP4	0	1	0	0	1	1
PGM2	0	1	1	0	2	1
PGM3	0	0	0	1	1	1
PGPEP1L	0	0	0	2	2	2
PGS1	0	0	0	1	1	1
PHACTR4	0	0	0	2	2	2

PHB	0	0	0	1	1	1
PHC3	0	0	0	15	15	15
PHF13	0	0	0	1	1	1
PHF15	0	0	0	4	4	4
PHF21A	0	0	0	5	5	5
PHF7	1	0	0	0	1	0
PHGDH	11	0	0	1	12	1
PHKA1	0	1	0	2	3	3
PHKB	0	1	0	0	1	1
PHLDB1	0	0	0	1	1	1
PHLDB2	0	1	0	0	1	1
PHLPP2	0	0	0	2	2	2
PHTF1	0	15	0	0	15	15
PHYHD1	0	1	0	0	1	1
PHYHIP	0	0	0	1	1	1
PI15	0	1	0	0	1	1
PI4KA	5	0	0	0	5	0
PI4KB	0	0	0	7	7	7
PIEZO2	0	0	0	2	2	2
PIGM	0	0	0	1	1	1
PIGN	0	1	0	0	1	1
PIGU	0	0	0	3	3	3
PIK3C2A	0	1	0	0	1	1
PIK3C2B	0	0	0	2	2	2
PIK3C2G	6	14	8	6	34	20
PIK3C3	0	11	0	0	11	11
PIK3CD	0	0	0	1	1	1
PIK3R3	6	0	0	0	6	0
PIK3R4	0	0	0	1	1	1
PIK3R6	11	1	0	0	12	1
PIKFYVE	0	1	0	0	1	1
PIM2	10	0	0	0	10	0
PION	0	0	0	1	1	1
PIP	0	0	0	1	1	1
PIR	0	0	0	1	1	1
PITRM1	0	1	0	0	1	1
PIWIL2	0	0	0	1	1	1
PIWIL3	7	2	0	3	12	5
PKD1L1	1	3	0	1	5	4
PKD1L2	2	0	3	2	7	2
PKD1L3	0	15	0	0	15	15
PKD2	0	0	0	1	1	1
PKD2L1	0	9	0	0	9	9
PKHD1	0	6	0	5	11	11
PKHD1L1	30	6	0	1	37	7

PKM2	1	0	0	0	1	0
PKN3	0	0	0	1	1	1
PKP1	0	0	0	1	1	1
PKP4	2	0	0	0	2	0
PLA2G2E	1	0	0	0	1	0
PLA2G3	0	0	0	7	7	7
PLA2G4C	0	0	0	9	9	9
PLA2G4D	7	0	0	0	7	0
PLA2G4F	0	1	0	3	4	4
PLA2G7	0	1	0	0	1	1
PLA2R1	1	2	0	4	7	6
PLAC1L	1	0	0	0	1	0
PLAC4	0	0	0	1	1	1
PLAT	0	0	0	9	9	9
PLB1	0	0	0	1	1	1
PLCB2	0	0	0	2	2	2
PLCB3	0	0	0	2	2	2
PLCD3	0	0	0	1	1	1
PLCD4	0	0	0	1	1	1
PLCL1	0	0	0	1	1	1
PLCL2	0	1	0	4	5	5
PLEC	0	0	0	3	3	3
PLEK2	0	1	0	0	1	1
PLEKHA1	0	10	0	1	11	11
PLEKHA8	0	0	0	1	1	1
PLEKHB2	0	1	0	0	1	1
PLEKHF1	0	0	0	1	1	1
PLEKHG1	0	0	0	1	1	1
PLEKHG2	1	0	0	1	2	1
PLEKHG4	0	1	0	0	1	1
PLEKHG4B	0	0	0	1	1	1
PLEKHG5	0	0	0	2	2	2
PLEKHG6	0	0	0	2	2	2
PLEKHH1	0	8	0	1	9	9
PLEKHH2	0	1	0	1	2	2
PLEKHH3	0	0	0	1	1	1
PLEKHM2	0	0	0	4	4	4
PLIN4	0	0	0	4	4	4
PLK1S1	0	3	0	14	17	17
PLK3	0	0	0	2	2	2
PLOD3	7	0	0	1	8	1
PLS1	0	1	0	0	1	1
PLSCR1	0	2	0	0	2	2
PLSCR5	0	1	0	11	12	12
PLXDC2	0	2	0	0	2	2

PLXNA1	0	0	0	1	1	1
PLXNA2	0	0	0	2	2	2
PLXNB3	0	0	0	1	1	1
PM20D1	0	0	0	2	2	2
PMEL	0	1	0	3	4	4
PMF1	0	1	0	1	2	2
PMFBP1	0	1	0	1	2	2
PML	0	1	0	2	3	3
PMS1	0	0	0	1	1	1
PMS2	0	0	0	1	1	1
PMVK	0	1	0	0	1	1
PNCK	0	1	0	1	2	2
PNLDC1	0	2	0	0	2	2
PNLIPRP1	0	1	0	1	2	2
PNLIPRP2	0	0	16	4	20	4
PNLIPRP3	0	1	0	1	2	2
PNMT	0	4	0	1	5	5
PNPLA1	0	12	0	0	12	12
PNPLA7	0	1	0	3	4	4
PODXL2	0	0	0	1	1	1
POF1B	0	2	0	0	2	2
POFUT1	0	0	0	1	1	1
POLD1	0	0	0	1	1	1
POLDIP2	0	0	0	1	1	1
POLDIP3	0	0	0	1	1	1
POLE	2	0	0	7	9	7
POLE2	1	0	0	1	2	1
POLG	1	0	0	0	1	0
POLG2	0	4	0	4	8	8
POLI	0	6	0	0	6	6
POLK	0	1	0	2	3	3
POLN	0	1	0	3	4	4
POLQ	9	0	0	0	9	0
POLR1E	0	0	0	1	1	1
POLR2A	0	0	0	3	3	3
POLR2I	0	0	3	0	3	0
POLR2J2	4	0	0	0	4	0
POLR3A	0	1	0	1	2	2
POLR3C	0	0	0	1	1	1
POLR3D	0	0	0	1	1	1
POLR3F	0	0	0	3	3	3
POLR3G	0	0	0	1	1	1
POM121L12	0	2	0	0	2	2
POM121L2	0	1	0	0	1	1
POMGNT1	0	0	0	2	2	2

POMT1	1	0	0	1	2	1
PON2	0	0	0	1	1	1
POP1	0	0	0	1	1	1
POP5	0	0	1	0	1	0
POTEA	2	6	0	1	9	7
POTEH	1	7	0	0	8	7
POU1F1	1	0	0	0	1	0
POU4F2	0	0	0	1	1	1
POU6F1	0	0	0	1	1	1
POU6F2	0	1	0	0	1	1
PPAN-P2RY11	0	0	0	2	2	2
PPARGC1B	0	0	0	1	1	1
PPCDC	0	0	0	1	1	1
PPEF2	0	3	0	2	5	5
PPFIA3	8	0	0	4	12	4
PPIC	0	0	0	10	10	10
PPID	0	0	0	1	1	1
PPIE	0	1	0	0	1	1
PPIL2	0	0	0	1	1	1
PPIP5K2	0	1	0	0	1	1
PPL	0	2	0	0	2	2
PPM1F	0	0	0	2	2	2
PPM1G	0	0	0	3	3	3
PPM1J	1	0	0	1	2	1
PPM1M	2	0	0	0	2	0
PPP1R12A	0	0	1	0	1	0
PPP1R13B	0	1	0	0	1	1
PPP1R15A	0	2	0	1	3	3
PPP1R26	0	0	0	3	3	3
PPP1R32	1	0	0	0	1	0
PPP1R3A	0	0	0	11	11	11
PPP1R42	1	0	1	0	2	0
PPP2R3A	0	1	0	0	1	1
PPP2R5D	2	0	0	0	2	0
PPP6R3	1	0	0	0	1	0
PPRC1	0	1	0	0	1	1
PQLC3	1	0	0	1	2	1
PRAME	0	0	0	1	1	1
PRAMEF1	0	13	0	0	13	13
PRAMEF10	0	0	0	1	1	1
PRAMEF11	0	4	0	4	8	8
PRAMEF12	0	1	0	0	1	1
PRAMEF2	0	8	0	0	8	8
PRAMEF4	0	1	0	0	1	1
PRB4	0	2	0	1	3	3

PRC1	0	0	0	1	1	1
PRCP	0	0	0	1	1	1
PRDM15	0	0	0	1	1	1
PRDM4	0	0	0	1	1	1
PRDM9	0	2	0	1	3	3
PREPL	1	0	0	0	1	0
PREX2	0	0	0	1	1	1
PRH1	0	0	0	1	1	1
PRIM2	0	0	0	1	1	1
PRKAB1	0	0	0	1	1	1
PRKACA	0	0	0	1	1	1
PRKAR2A	0	1	0	0	1	1
PRKCG	0	0	0	2	2	2
PRKD3	0	0	0	5	5	5
PRKDC	0	0	0	2	2	2
PRKG1	0	0	0	2	2	2
PRKRA	19	0	0	0	19	0
PRMT6	0	0	0	1	1	1
PRMT7	0	8	0	0	8	8
PRODH	0	16	0	0	16	16
PROKR1	0	5	0	0	5	5
PROKR2	0	0	0	3	3	3
PROM2	0	0	0	1	1	1
PROX2	0	0	0	1	1	1
PROZ	1	0	0	1	2	1
PRPF31	1	0	0	0	1	0
PRPF40B	0	0	0	1	1	1
PRPF8	0	13	0	3	16	16
PRPH	3	0	0	0	3	0
PRPS1L1	0	0	0	5	5	5
PRPSAP1	0	1	0	0	1	1
PRR14	0	0	0	1	1	1
PRR19	0	0	0	2	2	2
PRR4	0	0	1	0	1	0
PRRC1	0	0	0	1	1	1
PRRC2B	0	0	0	1	1	1
PRRC2C	0	0	0	2	2	2
PRRT2	0	0	0	2	2	2
PRSS12	0	0	0	3	3	3
PRSS3	1	0	0	0	1	0
PRSS36	0	1	0	0	1	1
PRSS37	0	0	0	2	2	2
PRSS45	0	1	0	0	1	1
PRSS53	1	0	0	0	1	0
PRSS57	0	1	0	0	1	1

PRSS58	0	0	0	2	2	2
PRSS8	0	0	0	2	2	2
PRUNE2	1	0	0	1	2	1
PSAPL1	0	0	0	17	17	17
PSCA	0	11	0	0	11	11
PSD3	0	0	0	1	1	1
PSD4	1	0	0	0	1	0
PSEN2	0	0	0	1	1	1
PSG1	0	1	0	0	1	1
PSG11	0	1	0	0	1	1
PSG5	0	1	0	0	1	1
PSG6	0	2	0	2	4	4
PSG8	1	0	0	0	1	0
PSG9	0	4	0	0	4	4
PSKH2	0	7	0	0	7	7
PSMB1	0	0	0	1	1	1
PSMB11	0	0	0	3	3	3
PSMC3IP	1	0	0	0	1	0
PSMC5	0	0	0	1	1	1
PSMD11	0	0	0	1	1	1
PSMD12	4	0	0	0	4	0
PSPC1	0	0	0	1	1	1
PSPH	0	1	0	0	1	1
PSRC1	0	0	0	1	1	1
PSTPIP2	0	0	0	1	1	1
PTBP2	0	0	0	1	1	1
PTCD3	0	1	0	0	1	1
PTCH2	0	0	0	1	1	1
PTCHD3	0	2	0	23	25	25
PTDSS2	0	0	0	1	1	1
PTGDR	0	1	0	1	2	2
PTGER2	0	1	0	0	1	1
PTGES2	0	0	0	2	2	2
PTGIS	0	1	0	0	1	1
PTH1R	1	0	0	0	1	0
PTH2R	0	12	0	0	12	12
PTK6	0	0	0	1	1	1
PTK7	0	0	0	1	1	1
PTPLAD1	0	1	0	0	1	1
PTPN11	0	1	0	0	1	1
PTPN13	1	0	0	0	1	0
PTPN18	0	1	0	0	1	1
PTPN21	0	3	0	0	3	3
PTPN22	0	0	0	1	1	1
PTPN5	0	0	0	1	1	1

PTPN7	0	1	0	1	2	2
PTPN9	0	0	0	2	2	2
PTPRA	0	0	0	1	1	1
PTPRD	0	0	0	1	1	1
PTPRF	0	0	0	3	3	3
PTPRH	0	4	0	4	8	8
PTPRM	2	1	0	0	3	1
PTPRN2	1	0	0	1	2	1
PTPRQ	0	0	0	1	1	1
PTPRR	0	2	0	0	2	2
PTPRT	0	0	0	8	8	8
PTPRU	0	0	0	3	3	3
PTS	1	0	0	0	1	0
PTTG2	0	0	0	12	12	12
PUF60	0	0	0	2	2	2
PUM2	0	0	0	1	1	1
PVRIG	0	1	0	2	3	3
PWP2	0	1	0	0	1	1
PXDNL	0	17	0	3	20	20
PXMP2	0	0	0	1	1	1
PYGB	0	0	0	2	2	2
PYGL	0	1	0	0	1	1
PYGM	0	2	0	1	3	3
PYHIN1	0	0	0	1	1	1
PYROXD1	0	0	0	1	1	1
PYROXD2	0	0	0	1	1	1
PZP	1	3	0	1	5	4
QARS	0	0	0	1	1	1
QPCT	0	1	0	0	1	1
QPRT	0	1	0	0	1	1
QRFPR	0	0	0	1	1	1
QRICH1	0	0	0	2	2	2
QSOX2	0	1	0	0	1	1
R3HDML	0	0	0	5	5	5
RAB11A	0	0	1	0	1	0
RAB11FIP5	0	0	0	1	1	1
RAB37	0	0	0	1	1	1
RAB38	0	0	0	1	1	1
RAB3GAP2	0	0	0	1	1	1
RAB3IP	0	6	0	0	6	6
RAB41	0	0	0	1	1	1
RAB42	0	0	0	1	1	1
RAB5C	4	0	0	0	4	0
RABEP1	0	0	0	1	1	1
RABEPK	0	0	0	8	8	8

RABIF	0	0	0	1	1	1
RABL2A	0	1	0	9	10	10
RABL2B	0	0	0	1	1	1
RAD1	1	1	0	0	2	1
RAD51AP1	0	0	0	1	1	1
RAD51AP2	0	0	0	1	1	1
RAD51C	1	1	0	0	2	1
RAD51D	0	2	0	0	2	2
RAD52	0	26	0	1	27	27
RAD54L	0	1	0	0	1	1
RAD9B	0	0	0	3	3	3
RAET1E	0	4	0	0	4	4
RAG1	0	1	0	2	3	3
RAG2	0	1	0	0	1	1
RAI1	0	0	0	1	1	1
RAI14	0	0	0	1	1	1
RALBP1	0	0	0	1	1	1
RALGAPA2	0	0	0	3	3	3
RALY	0	0	0	1	1	1
RANBP1	0	0	0	1	1	1
RANBP17	1	0	0	1	2	1
RANBP3L	1	0	0	0	1	0
RANGRF	0	5	0	0	5	5
RAP1GAP	1	0	0	0	1	0
RAP2C	0	0	0	2	2	2
RAPGEF3	0	0	0	1	1	1
RAPGEF4	4	0	0	0	4	0
RAPGEF6	0	3	0	0	3	3
RAPH1	0	2	0	0	2	2
RAPSN	0	0	0	1	1	1
RARA	0	0	0	1	1	1
RARRES3	0	0	0	1	1	1
RARS	0	1	0	0	1	1
RASAL2	0	0	1	1	2	1
RASD1	0	1	0	0	1	1
RASGEF1A	0	1	0	0	1	1
RASGRF1	0	0	0	1	1	1
RASGRP3	0	1	0	0	1	1
RASGRP4	0	1	0	0	1	1
RASSF6	1	0	0	0	1	0
RASSF9	0	1	0	0	1	1
RBBP8	0	0	0	2	2	2
RBCK1	1	0	0	0	1	0
RBFOX1	1	0	0	0	1	0
RBKS	7	0	0	0	7	0

RBL1	0	0	0	2	2	2
RBM15B	0	0	0	4	4	4
RBM19	0	0	0	1	1	1
RBM23	1	0	0	0	1	0
RBM27	0	3	0	0	3	3
RBM43	0	0	0	3	3	3
RBM44	0	0	0	2	2	2
RBM6	0	0	0	1	1	1
RBMS1	2	0	0	0	2	0
RBMS3	1	0	0	0	1	0
RBMXL1	0	0	0	10	10	10
RBP3	0	0	0	1	1	1
RBPMS	0	0	0	1	1	1
RC3H1	0	0	0	5	5	5
RCC1	0	2	0	0	2	2
RCCD1	0	0	0	1	1	1
RCN3	0	0	0	1	1	1
RCOR2	0	1	0	0	1	1
RCOR3	0	1	0	0	1	1
RCSD1	0	1	0	0	1	1
RDH12	1	1	0	0	2	1
RDH13	0	0	0	1	1	1
RDH16	0	1	0	0	1	1
RDM1	0	0	0	2	2	2
RDX	8	1	0	0	9	1
RECQL	2	0	0	1	3	1
RECQL5	0	0	0	1	1	1
REEP2	12	0	0	0	12	0
REEP3	0	0	0	1	1	1
REG1B	0	0	0	1	1	1
REG3G	0	1	0	0	1	1
RELA	0	11	0	0	11	11
RELN	0	5	0	2	7	7
RELT	0	0	0	1	1	1
RERGL	0	1	0	1	2	2
RESP18	1	0	0	0	1	0
RETSAT	4	2	0	4	10	6
REV1	0	0	0	1	1	1
REV3L	0	0	0	1	1	1
RFC5	0	0	0	1	1	1
RFFL	0	0	0	1	1	1
RFPL1	0	2	0	0	2	2
RFPL2	2	0	0	0	2	0
RFT1	0	0	0	5	5	5
RFX3	0	0	0	2	2	2

RFX8	2	0	0	0	2	0
RG9MTD2	1	1	0	0	2	1
RG9MTD3	1	0	0	1	2	1
RGAG1	0	0	0	2	2	2
RGAG4	0	0	0	3	3	3
RGL2	0	0	0	4	4	4
RGL3	0	1	0	1	2	2
RGL4	0	0	0	2	2	2
RGPD3	0	1	0	2	3	3
RGS12	1	0	0	0	1	0
RGS18	0	0	0	2	2	2
RGS6	2	0	0	0	2	0
RGS7	0	1	0	0	1	1
RGS9	0	1	0	0	1	1
RHBDD3	0	2	0	0	2	2
RHBDF1	0	0	0	1	1	1
RHBDL2	1	0	0	0	1	0
RHBG	0	1	0	2	3	3
RHCG	0	0	0	1	1	1
RHO	0	0	0	1	1	1
RHOBTB3	0	1	0	1	2	2
RICTOR	0	0	0	1	1	1
RILP	0	0	0	1	1	1
RIMBP2	0	0	0	1	1	1
RIMBP3	0	0	0	3	3	3
RIMS1	3	0	0	0	3	0
RIMS2	0	2	0	0	2	2
RINT1	0	3	0	0	3	3
RIOK2	0	1	0	0	1	1
RIPK1	0	0	0	1	1	1
RIPK3	0	3	0	4	7	7
RIPK4	0	0	0	2	2	2
RLBP1	0	0	0	2	2	2
RLN1	0	0	0	1	1	1
RLN3	0	2	0	0	2	2
RLTPR	0	0	0	3	3	3
RMND5B	1	1	0	0	2	1
RNASE2	0	1	0	0	1	1
RNASE9	0	0	0	1	1	1
RNASEH2A	5	0	0	0	5	0
RNASEL	0	4	0	3	7	7
RNF112	0	2	0	0	2	2
RNF123	0	7	0	1	8	8
RNF141	0	0	6	0	6	0
RNF145	0	0	0	1	1	1

RNF168	0	0	0	1	1	1
RNF180	0	0	0	2	2	2
RNF181	0	0	0	1	1	1
RNF186	0	2	0	0	2	2
RNF187	0	0	0	1	1	1
RNF19A	0	1	0	0	1	1
RNF20	0	1	0	0	1	1
RNF214	0	0	0	1	1	1
RNF217	0	1	0	0	1	1
RNF25	0	2	0	2	4	4
RNF34	0	0	0	1	1	1
RNLS	0	0	0	1	1	1
RNMTL1	0	1	0	0	1	1
RNPEP	2	0	0	0	2	0
RNPS1	0	0	0	1	1	1
ROBO3	0	0	0	1	1	1
ROCK1	0	1	0	0	1	1
ROM1	0	0	0	3	3	3
ROPN1B	0	1	0	0	1	1
ROPN1L	0	1	0	0	1	1
ROR2	0	4	0	0	4	4
ROS1	0	1	0	0	1	1
RP1L1	0	0	0	2	2	2
RP9	0	0	5	0	5	0
RPAIN	0	0	0	1	1	1
RPAP2	0	0	0	1	1	1
RPF1	0	0	0	2	2	2
RPGRIP1	0	0	0	1	1	1
RPGRIP1L	0	0	0	3	3	3
RPL10	0	0	0	1	1	1
RPL3	0	0	0	1	1	1
RPL30	0	0	0	1	1	1
RPL3L	0	0	0	3	3	3
RPS27L	0	1	0	0	1	1
RPS6KA3	0	0	0	1	1	1
RPS6KB2	0	0	0	1	1	1
RPTN	0	2	0	0	2	2
RPTOR	0	0	0	1	1	1
RPUSD3	0	0	1	0	1	0
RPUSD4	1	0	0	0	1	0
RRAS	0	3	0	0	3	3
RRH	0	0	0	1	1	1
RRM1	0	2	0	0	2	2
RRN3	0	0	0	6	6	6
RRP1	0	0	0	1	1	1

RRP12	4	0	0	0	4	0
RRP15	0	0	0	5	5	5
RRP36	1	0	0	0	1	0
RRP8	1	0	0	1	2	1
RSBN1	0	0	0	1	1	1
RSF1	0	14	0	0	14	14
RSPH1	2	0	0	0	2	0
RSPO3	0	0	0	1	1	1
RTF1	0	0	0	1	1	1
RTL1	0	0	0	1	1	1
RTN4IP1	0	0	0	2	2	2
RTP2	0	0	0	1	1	1
RTTN	0	0	0	1	1	1
RUFY3	0	0	0	2	2	2
RUFY4	0	1	0	0	1	1
RUSC1-AS1	0	8	0	0	8	8
RUSC2	0	1	0	1	2	2
RWDD2B	1	0	0	1	2	1
RXFP4	0	1	0	0	1	1
RXRA	0	1	0	0	1	1
RYR1	0	1	0	4	5	5
RYR2	0	1	0	3	4	4
RYR3	0	0	0	1	1	1
S100A3	0	0	0	6	6	6
S1PR1	0	1	0	0	1	1
S1PR2	0	1	0	0	1	1
SAA1	0	0	0	2	2	2
SAAL1	1	0	0	0	1	0
SACM1L	0	1	0	0	1	1
SACS	0	2	0	3	5	5
SAFB2	0	0	0	5	5	5
SALL2	0	0	0	1	1	1
SAMD11	0	0	0	2	2	2
SAMD12	0	0	0	1	1	1
SAMD15	0	2	0	1	3	3
SAMD3	1	1	0	1	3	2
SAMD4A	9	0	0	0	9	0
SAMD9	0	0	0	6	6	6
SAMD9L	0	1	0	3	4	4
SAP130	0	2	0	1	3	3
SARDH	0	2	0	0	2	2
SARM1	0	0	0	8	8	8
SARS2	0	1	0	0	1	1
SASH1	0	0	0	6	6	6
SASH3	1	0	0	0	1	0

SATL1	1	3	0	0	4	3
SBDS	2	0	0	0	2	0
SBF2	1	0	0	0	1	0
SC5DL	0	1	0	0	1	1
SCAF1	0	0	0	1	1	1
SCAF11	1	0	0	2	3	2
SCAF8	0	1	0	0	1	1
SCAMP1	0	1	0	0	1	1
SCAP	0	0	0	1	1	1
SCAPER	0	1	0	1	2	2
SCARA3	0	1	0	2	3	3
SCEL	1	1	0	0	2	1
SCFD1	0	1	0	0	1	1
SCG2	0	0	0	2	2	2
SCGB1A1	0	0	0	2	2	2
SCGB1D2	0	1	0	0	1	1
SCGN	0	0	0	1	1	1
SCIN	0	1	0	0	1	1
SCML4	0	1	0	0	1	1
SCN10A	0	0	0	3	3	3
SCN11A	0	0	0	1	1	1
SCN1A	0	3	0	0	3	3
SCN2A	0	9	0	0	9	9
SCN3A	0	15	0	0	15	15
SCN3B	0	0	0	2	2	2
SCN4A	0	2	0	1	3	3
SCN5A	2	0	0	11	13	11
SCN7A	3	0	0	1	4	1
SCNM1	4	0	0	0	4	0
SCRN1	0	0	0	1	1	1
SCRN2	0	0	0	1	1	1
SCRN3	0	1	0	0	1	1
SCUBE2	1	0	0	0	1	0
SCYL1	1	0	0	0	1	0
SDC2	0	0	0	5	5	5
SDCCAG8	4	0	0	0	4	0
SDHA	0	1	0	2	3	3
SDK2	0	0	0	1	1	1
SDR39U1	0	0	0	1	1	1
SDSL	0	3	0	3	6	6
SEC14L4	0	3	0	0	3	3
SEC22B	0	1	0	0	1	1
SEC22C	1	0	0	0	1	0
SEC23A	0	3	0	0	3	3
SEC23B	0	1	0	1	2	2

SEC31B	0	1	0	1	2	2
SEC61A2	0	1	0	2	3	3
SEL1L2	1	0	0	1	2	1
SELL	18	0	0	0	18	0
SELP	0	1	0	6	7	7
SELPLG	0	0	0	1	1	1
SEMA5B	0	0	0	2	2	2
SEMA6A	0	3	0	0	3	3
SEMA6C	0	0	0	1	1	1
SEMG2	0	3	0	0	3	3
SENP5	0	1	0	0	1	1
Sep-01	1	0	0	0	1	0
Sep-02	0	0	0	1	1	1
Sep-06	0	1	0	0	1	1
Sep-07	0	1	0	0	1	1
Sep-10	0	1	0	0	1	1
Sep-14	0	1	0	0	1	1
SEPSECS	0	0	0	1	1	1
SERAC1	1	1	0	4	6	5
SERGEF	0	3	0	0	3	3
SERHL2	5	0	0	1	6	1
SERINC5	1	0	0	0	1	0
SERPINA1	1	0	0	0	1	0
SERPINA10	0	8	0	0	8	8
SERPINA12	0	5	0	0	5	5
SERPINA3	0	0	0	2	2	2
SERPINA4	0	1	0	1	2	2
SERPINA9	3	6	0	0	9	6
SERPINB10	0	1	0	1	2	2
SERPINB11	1	0	1	0	2	0
SERPINB13	0	2	0	0	2	2
SERPINB3	0	0	0	5	5	5
SERPINB4	0	0	0	1	1	1
SERPINB7	0	1	0	0	1	1
SERPINC1	0	0	0	1	1	1
SERPINE2	0	1	0	0	1	1
SERPINH1	0	4	0	1	5	5
SERPINI1	0	0	0	2	2	2
SESN2	0	0	0	1	1	1
SESN3	1	0	0	0	1	0
SESTD1	0	0	0	15	15	15
SETD2	10	0	0	0	10	0
SETD4	0	1	0	0	1	1
SETD5	0	0	0	1	1	1
SETD6	0	0	0	1	1	1

SETDB1	0	0	0	1	1	1
SF3A3	0	0	0	2	2	2
SF3B3	0	0	0	17	17	17
SF3B4	0	0	0	1	1	1
SFI1	0	0	0	1	1	1
SFN	0	1	0	1	2	2
SFT2D1	0	0	0	1	1	1
SFXN3	0	0	0	1	1	1
SFXN4	3	0	0	0	3	0
SGCB	0	0	0	1	1	1
SGK1	0	1	0	0	1	1
SGK223	0	1	0	0	1	1
SGK494	1	0	0	0	1	0
SGPP2	2	0	0	0	2	0
SGSH	0	0	0	1	1	1
SGSM2	0	0	0	2	2	2
SGSM3	1	0	0	0	1	0
SH2D2A	0	0	0	1	1	1
SH2D4A	1	0	0	0	1	0
SH2D6	4	0	0	0	4	0
SH3BP2	0	0	0	3	3	3
SH3BP4	0	4	0	0	4	4
SH3D21	0	1	0	0	1	1
SH3GLB2	2	0	0	0	2	0
SH3PXD2B	0	0	0	2	2	2
SH3TC1	5	0	0	1	6	1
SH3TC2	0	1	0	0	1	1
SHANK1	0	0	0	1	1	1
SHANK2	0	8	1	0	9	8
SHBG	0	0	0	3	3	3
SHC4	1	0	0	1	2	1
SHCBP1	0	0	0	3	3	3
SHE	0	0	0	1	1	1
SHF	0	0	0	1	1	1
SHKBP1	1	0	0	1	2	1
SHPK	0	1	0	1	2	2
SHROOM1	1	0	0	0	1	0
SHROOM2	0	6	0	1	7	7
SIDT1	1	1	0	0	2	1
SIDT2	0	0	0	1	1	1
SIGLEC1	0	5	0	0	5	5
SIGLEC10	1	0	0	0	1	0
SIGLEC12	0	1	0	0	1	1
SIGLEC5	0	8	0	10	18	18
SIGLEC8	0	0	0	2	2	2

SIK2	0	0	0	1	1	1
SIK3	0	1	0	0	1	1
SIKE1	0	0	0	1	1	1
SIN3B	0	0	0	3	3	3
SIPA1L2	0	0	0	2	2	2
SIRPB1	0	0	0	12	12	12
SIRPG	0	1	0	0	1	1
SIRT3	1	0	0	0	1	0
SIRT4	0	0	0	1	1	1
SKA3	0	10	0	25	35	35
SKIV2L	1	1	0	0	2	1
SLA	0	0	0	2	2	2
SLA2	0	1	0	1	2	2
SLAIN1	0	0	0	16	16	16
SLAMF1	0	0	0	1	1	1
SLAMF8	0	1	0	0	1	1
SLBP	0	0	0	1	1	1
SLC10A1	0	2	0	0	2	2
SLC10A4	0	0	0	1	1	1
SLC12A1	0	1	0	0	1	1
SLC12A2	8	0	0	0	8	0
SLC12A5	0	0	0	14	14	14
SLC12A6	0	1	0	0	1	1
SLC12A7	0	0	0	1	1	1
SLC12A8	0	1	0	1	2	2
SLC12A9	0	0	0	1	1	1
SLC13A1	0	5	0	0	5	5
SLC13A2	0	1	0	0	1	1
SLC13A5	0	0	0	4	4	4
SLC14A1	0	0	0	21	21	21
SLC15A1	0	0	0	1	1	1
SLC16A12	0	0	0	1	1	1
SLC17A4	0	8	0	2	10	10
SLC17A5	0	0	0	2	2	2
SLC17A7	0	0	0	1	1	1
SLC17A9	0	0	0	1	1	1
SLC18A1	0	0	0	1	1	1
SLC18A2	2	0	0	0	2	0
SLC19A3	0	0	0	1	1	1
SLC1A1	0	1	0	0	1	1
SLC1A5	0	0	0	1	1	1
SLC1A7	12	0	0	0	12	0
SLC22A10	0	1	0	2	3	3
SLC22A11	0	1	0	0	1	1
SLC22A14	4	0	0	21	25	21

SLC22A15	0	0	0	1	1	1
SLC22A25	8	0	0	4	12	4
SLC22A3	0	3	0	0	3	3
SLC22A9	0	0	0	5	5	5
SLC23A1	1	0	0	1	2	1
SLC23A2	0	0	0	3	3	3
SLC24A6	1	0	0	0	1	0
SLC25A13	0	0	0	1	1	1
SLC25A2	0	12	0	2	14	14
SLC25A21	0	1	0	0	1	1
SLC25A22	0	0	0	1	1	1
SLC25A24	0	1	0	2	3	3
SLC25A31	0	6	0	0	6	6
SLC25A32	0	0	0	1	1	1
SLC25A33	0	0	0	1	1	1
SLC25A45	0	1	0	0	1	1
SLC25A48	0	1	0	0	1	1
SLC25A5	0	0	0	7	7	7
SLC26A10	4	4	0	0	8	4
SLC26A2	0	0	0	2	2	2
SLC26A4	2	0	0	0	2	0
SLC26A7	0	0	0	1	1	1
SLC26A8	1	1	0	1	3	2
SLC27A3	0	0	0	3	3	3
SLC27A6	0	0	0	2	2	2
SLC28A3	0	1	0	0	1	1
SLC29A4	0	0	0	1	1	1
SLC2A11	0	0	0	6	6	6
SLC2A5	0	0	0	1	1	1
SLC2A9	0	1	0	0	1	1
SLC30A2	0	0	1	0	1	0
SLC30A8	0	1	0	1	2	2
SLC34A1	0	0	0	1	1	1
SLC34A2	1	7	0	2	10	9
SLC35B3	0	0	0	1	1	1
SLC35C2	0	0	0	2	2	2
SLC35F5	0	0	0	4	4	4
SLC35G3	0	0	0	1	1	1
SLC36A2	0	0	0	1	1	1
SLC36A4	6	0	0	1	7	1
SLC37A2	0	0	0	1	1	1
SLC37A4	0	11	1	14	26	25
SLC38A10	0	0	0	2	2	2
SLC38A6	1	0	0	0	1	0
SLC39A2	0	1	0	0	1	1

SLC39A4	0	0	0	1	1	1
SLC39A5	0	1	0	1	2	2
SLC3A1	0	1	0	0	1	1
SLC43A3	0	0	0	1	1	1
SLC44A3	0	0	0	1	1	1
SLC44A4	0	0	0	1	1	1
SLC45A2	0	0	0	2	2	2
SLC45A3	0	0	0	2	2	2
SLC46A1	0	0	0	6	6	6
SLC47A1	0	0	0	1	1	1
SLC4A10	0	1	0	0	1	1
SLC4A2	0	0	0	1	1	1
SLC4A3	0	0	0	6	6	6
SLC4A5	0	0	0	1	1	1
SLC4A7	0	1	0	0	1	1
SLC4A9	0	0	0	1	1	1
SLC5A10	0	3	0	0	3	3
SLC5A12	0	0	0	1	1	1
SLC5A2	0	1	0	3	4	4
SLC5A4	0	8	0	7	15	15
SLC5A6	0	1	0	1	2	2
SLC6A16	0	2	0	0	2	2
SLC6A18	0	1	0	1	2	2
SLC6A19	0	0	0	3	3	3
SLC6A5	0	0	0	1	1	1
SLC6A6	0	0	0	1	1	1
SLC7A13	1	0	0	0	1	0
SLC7A2	0	0	0	1	1	1
SLC8A1	0	0	0	13	13	13
SLC9A1	0	2	0	0	2	2
SLC9A11	0	0	0	1	1	1
SLC9A4	0	0	0	2	2	2
SLC9A5	0	0	0	1	1	1
SLC9A9	1	0	0	0	1	0
SLCO1A2	0	0	0	2	2	2
SLCO1B1	0	2	0	19	21	21
SLCO1B3	0	0	0	2	2	2
SLCO2B1	0	0	0	1	1	1
SLCO4C1	0	0	1	0	1	0
SLCO5A1	0	1	0	1	2	2
SLCO6A1	0	4	0	0	4	4
SLFN11	0	1	0	0	1	1
SLFN12	0	0	0	1	1	1
SLFN12L	0	0	0	8	8	8
SLFN13	0	1	0	1	2	2

SLFN5	0	2	0	2	4	4
SLFNL1	0	2	0	5	7	7
SLIT1	0	1	0	0	1	1
SLIT3	0	1	0	0	1	1
SLITRK3	0	9	0	0	9	9
SLITRK5	0	0	0	2	2	2
SLITRK6	0	1	0	0	1	1
SLMAP	0	2	0	1	3	3
SMAD7	0	0	0	1	1	1
SMAD9	0	2	0	0	2	2
SMAP1	0	1	0	5	6	6
SMAP2	2	0	0	0	2	0
SMARCA4	0	0	0	3	3	3
SMARCC2	0	0	0	1	1	1
SMC1B	0	0	0	2	2	2
SMC5	0	0	0	1	1	1
SMC6	0	1	0	0	1	1
SMCHD1	0	0	0	1	1	1
SMCR8	0	1	0	1	2	2
SMEK1	0	0	0	1	1	1
SMEK2	1	0	0	0	1	0
SMG1	1	0	0	1	2	1
SMG5	0	0	0	2	2	2
SMG6	0	6	0	1	7	7
SMOC2	0	0	0	3	3	3
SMOX	0	0	0	1	1	1
SMPD3	0	0	0	1	1	1
SMPD4	0	7	0	2	9	9
SMPDL3B	0	0	0	3	3	3
SMR3B	0	0	0	1	1	1
SMTN	0	0	0	2	2	2
SMTNL1	0	1	0	0	1	1
SMTNL2	1	0	0	0	1	0
SMUG1	0	1	0	0	1	1
SMYD4	1	3	0	0	4	3
SMYD5	0	0	0	2	2	2
SNAP29	0	1	0	0	1	1
SNAPC1	0	0	0	5	5	5
SNAPC2	0	0	0	1	1	1
SNAPC5	0	1	0	0	1	1
SNAPIN	0	1	0	0	1	1
SNED1	0	0	0	2	2	2
SNRNP200	0	0	0	3	3	3
SNRNP35	0	0	0	1	1	1
SNRPB	0	5	0	0	5	5

SNRPB2	1	0	0	0	1	0
SNRPC	20	0	0	0	20	0
SNTB1	0	1	0	0	1	1
SNTG2	0	1	0	2	3	3
SNUPN	0	0	0	1	1	1
SNX14	0	1	0	0	1	1
SNX17	0	2	0	0	2	2
SNX18	0	1	0	0	1	1
SNX19	0	1	0	0	1	1
SNX25	0	0	0	1	1	1
SNX29	0	1	0	1	2	2
SNX31	0	0	0	2	2	2
SNX32	0	0	0	1	1	1
SNX5	2	0	0	0	2	0
SOAT2	0	3	0	0	3	3
SOC5	0	1	0	0	1	1
SORBS1	0	3	0	0	3	3
SORD	1	0	0	0	1	0
SORL1	0	0	0	7	7	7
SOS1	0	0	0	10	10	10
SOS2	0	0	0	1	1	1
SOSTDC1	0	0	0	3	3	3
SOX10	0	1	0	0	1	1
SOX11	0	0	0	1	1	1
SP100	1	0	0	0	1	0
SP110	0	1	0	0	1	1
SPAG16	0	1	0	0	1	1
SPAG17	0	0	0	1	1	1
SPAG4	0	0	0	1	1	1
SPAG8	0	2	0	0	2	2
SPANXN2	0	0	0	7	7	7
SPATA16	0	2	0	0	2	2
SPATA20	0	0	0	3	3	3
SPATA21	0	1	0	0	1	1
SPATA3	0	0	0	1	1	1
SPATA4	0	0	0	1	1	1
SPATA5	0	1	0	1	2	2
SPATA7	0	1	0	0	1	1
SPATA8	3	0	0	1	4	1
SPDYE1	0	0	0	2	2	2
SPDYE3	0	0	0	1	1	1
SPECC1	0	0	0	6	6	6
SPEF2	0	0	0	1	1	1
SPEN	0	0	0	1	1	1
SPERT	0	1	0	0	1	1

SPG20	0	0	1	0	1	0
SPG7	1	0	0	0	1	0
SPHKAP	0	0	0	4	4	4
SPICE1	0	1	0	1	2	2
SPIN2A	0	0	0	1	1	1
SPIN3	0	0	0	4	4	4
SPINK14	0	0	0	9	9	9
SPINK7	1	0	0	0	1	0
SPINT4	0	0	0	1	1	1
SPNS3	0	2	0	1	3	3
SPOCD1	0	0	0	2	2	2
SPOCK3	0	0	0	1	1	1
SPON1	0	1	0	0	1	1
SPPL2A	1	0	0	0	1	0
SPR	0	1	0	0	1	1
SPRED3	0	1	0	0	1	1
SPRR1B	0	0	0	1	1	1
SPRR2G	0	0	1	0	1	0
SPRY1	0	0	0	1	1	1
SPRYD5	1	0	0	0	1	0
SPTAN1	0	0	0	1	1	1
SPTBN1	0	0	0	1	1	1
SPTBN5	0	1	0	2	3	3
SPTLC1	0	1	0	1	2	2
SPTLC2	0	0	0	1	1	1
SPZ1	0	0	0	7	7	7
SRBD1	0	1	0	0	1	1
SRCAP	0	0	0	2	2	2
SRD5A2	1	0	0	0	1	0
SRD5A3	0	0	0	3	3	3
SREBF2	0	0	0	1	1	1
SREK1	0	0	0	1	1	1
SREK1IP1	0	0	0	3	3	3
SRFBP1	0	0	0	4	4	4
SRGAP2	0	4	0	0	4	4
SRGAP3	0	0	0	1	1	1
SRL	0	1	0	0	1	1
SRP54	0	0	0	1	1	1
SRPK2	1	0	0	0	1	0
SRPRB	0	0	0	1	1	1
SRPX	0	0	0	1	1	1
SRPX2	0	2	0	0	2	2
SRR	0	0	0	1	1	1
SRRD	1	0	0	1	2	1
SRRM3	0	0	0	7	7	7

SRRM5	0	0	0	1	1	1
SRRT	0	0	0	2	2	2
SS18	0	4	0	0	4	4
SSH1	0	0	0	1	1	1
SSH3	0	0	0	1	1	1
SSPO	0	2	0	26	28	28
SSTR1	0	0	0	1	1	1
SSU72	0	1	0	0	1	1
SSX5	1	0	0	0	1	0
ST14	0	0	0	1	1	1
ST18	0	0	0	1	1	1
ST20	0	0	0	3	3	3
ST3GAL2	0	1	0	1	2	2
ST3GAL5	0	0	0	1	1	1
ST3GAL6	0	0	0	1	1	1
ST6GALNAC1	1	0	0	1	2	1
ST6GALNAC6	0	0	0	1	1	1
ST7L	0	0	0	1	1	1
STAB1	0	0	0	2	2	2
STAB2	0	0	0	2	2	2
STAC	0	0	0	1	1	1
STAC3	0	0	0	1	1	1
STAG1	0	2	0	0	2	2
STAG3	0	5	0	1	6	6
STAP2	0	1	0	0	1	1
STARD13	0	0	0	7	7	7
STARD4	14	2	0	0	16	2
STARD6	0	18	0	0	18	18
STAT2	0	0	0	1	1	1
STAT3	0	0	0	1	1	1
STAT4	0	0	0	1	1	1
STAT5A	0	0	0	1	1	1
STATH	1	0	0	0	1	0
STBD1	0	1	0	3	4	4
STEAP4	0	3	0	0	3	3
STIL	0	0	0	1	1	1
STIP1	2	0	0	0	2	0
STK19	0	1	0	0	1	1
STK31	0	2	0	0	2	2
STK32A	0	1	0	0	1	1
STK32B	0	0	0	1	1	1
STK33	0	0	0	12	12	12
STK36	0	0	0	1	1	1
STMN3	0	0	0	1	1	1
STOML3	0	1	0	0	1	1

STON1-GTF2A1L	0	0	0	2	2	2
STOX1	0	2	0	0	2	2
STRC	1	0	0	0	1	0
STRN4	7	0	0	1	8	1
STX18	3	0	0	0	3	0
STX3	0	1	0	0	1	1
STX5	0	0	0	1	1	1
STX6	1	1	0	0	2	1
STXBP3	0	1	0	0	1	1
STXBP5L	0	1	0	0	1	1
STYXL1	0	0	0	1	1	1
SULF1	0	0	0	2	2	2
SULT1A1	1	0	0	0	1	0
SULT1C2	0	1	0	0	1	1
SULT1C3	0	10	0	0	10	10
SULT1C4	0	7	0	0	7	7
SULT1E1	0	0	0	1	1	1
SULT2A1	0	1	0	0	1	1
SUMF2	0	0	0	1	1	1
SUN1	0	0	0	2	2	2
SUN2	0	1	0	0	1	1
SUOX	0	0	1	0	1	0
SUPT3H	0	0	0	1	1	1
SUPT6H	0	8	0	0	8	8
SUSD2	0	3	0	4	7	7
SUSD3	1	1	0	0	2	1
SUV420H1	0	0	0	1	1	1
SUZ12	0	0	0	1	1	1
SV2A	0	0	0	1	1	1
SVEP1	0	1	0	0	1	1
SVIL	0	1	0	1	2	2
SVOPL	0	6	0	0	6	6
SYCP1	0	0	0	2	2	2
SYCP2	1	2	0	0	3	2
SYCP2L	0	1	0	1	2	2
SYDE2	0	0	0	2	2	2
SYN3	0	1	0	0	1	1
SYNC	0	0	0	1	1	1
SYNE1	0	18	0	6	24	24
SYNE2	0	14	0	0	14	14
SYNGR4	1	0	0	1	2	1
SYNM	0	3	0	1	4	4
SYNPO2L	0	0	0	2	2	2
SYT12	0	0	0	1	1	1

SYT14	0	0	0	2	2	2
SYT15	1	0	0	0	1	0
SYT17	0	2	0	0	2	2
SYT5	0	0	0	1	1	1
SYTL1	1	0	0	0	1	0
SYTL2	1	0	0	0	1	0
SYTL3	0	0	1	0	1	0
SZT2	1	0	0	5	6	5
TAAR2	0	19	0	0	19	19
TAAR8	0	0	0	1	1	1
TAAR9	0	0	0	1	1	1
TAC4	0	0	0	4	4	4
TACC2	0	1	0	1	2	2
TACR2	0	0	0	1	1	1
TADA2B	0	0	0	2	2	2
TAF1A	4	0	0	0	4	0
TAF1B	0	0	0	1	1	1
TAF1C	0	1	0	0	1	1
TAF2	1	0	0	0	1	0
TAF3	0	1	0	0	1	1
TAF6	0	0	0	3	3	3
TAF8	0	1	0	0	1	1
TALDO1	0	0	0	1	1	1
TANC2	0	11	0	0	11	11
TAOK3	0	0	0	1	1	1
TARBP1	1	1	0	1	3	2
TARBP2	1	0	0	0	1	0
TARSL2	0	0	0	2	2	2
TAS1R2	0	1	0	0	1	1
TAS2R14	0	0	0	1	1	1
TAS2R16	0	0	0	3	3	3
TAS2R19	0	7	0	0	7	7
TAS2R30	0	1	0	0	1	1
TAS2R31	0	0	0	1	1	1
TAS2R41	0	1	0	1	2	2
TAS2R46	0	1	0	7	8	8
TAS2R60	0	0	3	0	3	0
TAS2R7	0	1	0	0	1	1
TAS2R8	0	2	0	17	19	19
TATDN3	19	0	0	0	19	0
TAZ	3	0	0	0	3	0
TBC1D15	0	1	0	0	1	1
TBC1D17	0	0	0	1	1	1
TBC1D24	0	0	0	1	1	1
TBC1D28	2	1	0	0	3	1

TBC1D29	19	0	0	0	19	0
TBC1D3H	0	0	0	1	1	1
TBC1D5	0	1	0	0	1	1
TBC1D8	0	0	0	2	2	2
TBC1D9B	0	1	0	0	1	1
TBCC	0	0	0	2	2	2
TBCCD1	0	0	0	2	2	2
TBCD	0	1	0	1	2	2
TBCK	1	0	0	3	4	3
TBKBP1	0	1	0	0	1	1
TBR1	0	0	0	2	2	2
TBX10	0	0	0	1	1	1
TBX19	0	1	0	0	1	1
TBX6	0	0	0	1	1	1
TCEANC	0	1	0	0	1	1
TCEB3	0	0	0	1	1	1
TCEB3B	0	1	0	1	2	2
TCEB3CL	0	0	0	23	23	23
TCF12	0	2	0	0	2	2
TCF3	0	0	0	1	1	1
TCHH	0	7	0	2	9	9
TCHHL1	0	5	0	1	6	6
TCHP	1	0	0	0	1	0
TCIRG1	1	0	0	0	1	0
TCN1	0	0	0	1	1	1
TCN2	0	2	0	0	2	2
TCOF1	1	0	0	0	1	0
TCP1	0	0	0	1	1	1
TCP10L2	0	23	0	0	23	23
TCP11	1	0	0	0	1	0
TCP11L2	1	0	0	0	1	0
TCTN1	0	0	0	2	2	2
TDG	0	0	0	3	3	3
TDP1	1	0	0	0	1	0
TDRD5	0	0	0	1	1	1
TDRD6	0	4	0	0	4	4
TEAD2	0	0	0	4	4	4
TECTA	0	0	0	1	1	1
TEKT1	1	0	0	2	3	2
TEKT3	0	1	0	0	1	1
TEKT4	0	2	0	1	3	3
TEN1	0	4	0	0	4	4
TENC1	0	0	0	6	6	6
TEP1	0	0	0	2	2	2
TERF2IP	0	1	0	0	1	1

TEX101	1	0	0	0	1	0
TEX13B	1	5	0	0	6	5
TEX14	3	1	0	0	4	1
TEX15	0	3	0	1	4	4
TEX2	0	0	0	1	1	1
TF	1	0	0	2	3	2
TFDP1	1	0	0	0	1	0
TFDP3	0	3	0	0	3	3
TFR2	0	1	0	4	5	5
TGFBR2	0	0	0	14	14	14
TGM1	1	0	0	0	1	0
TGM3	0	0	0	14	14	14
TGM4	0	5	0	0	5	5
TGM5	0	0	0	1	1	1
TGM6	0	0	0	3	3	3
TGM7	1	0	0	0	1	0
TGOLN2	0	0	0	1	1	1
TGS1	0	3	0	0	3	3
TH1L	0	0	0	1	1	1
THADA	0	1	0	2	3	3
THAP5	0	0	0	1	1	1
THAP6	0	0	0	1	1	1
THAP9	0	0	0	1	1	1
THBS1	0	0	0	1	1	1
THBS2	0	0	0	1	1	1
THNSL1	0	1	0	1	2	2
THNSL2	2	0	0	3	5	3
THOC5	1	0	0	0	1	0
THRAP3	0	2	0	0	2	2
THSD1	0	0	0	2	2	2
THSD4	0	0	0	1	1	1
THSD7A	1	0	0	0	1	0
THSD7B	16	1	0	0	17	1
THUMPD2	1	0	0	0	1	0
THY1	0	0	0	1	1	1
TIAL1	0	16	0	0	16	16
TIAM1	0	0	0	1	1	1
TIAM2	1	1	0	0	2	1
TICAM2	0	0	0	1	1	1
TIE1	0	4	0	8	12	12
TIGD4	0	3	0	1	4	4
TIGD6	0	0	0	12	12	12
TIMD4	0	0	0	2	2	2
TINAG	0	1	0	0	1	1
TIPIN	0	1	0	0	1	1

TJAP1	0	1	0	0	1	1
TK2	0	0	0	1	1	1
TKTL2	0	0	0	1	1	1
TLCD1	0	0	0	2	2	2
TLE1	0	1	0	0	1	1
TLE2	0	0	0	1	1	1
TLE3	0	0	0	1	1	1
TLN2	0	0	0	1	1	1
TLR1	0	0	0	2	2	2
TLR10	0	1	0	1	2	2
TLR2	0	3	0	0	3	3
TLR5	0	1	0	0	1	1
TLR7	0	4	0	0	4	4
TM4SF4	0	0	0	1	1	1
TM7SF2	2	0	0	0	2	0
TMBIM4	0	0	0	3	3	3
TMC2	5	1	0	0	6	1
TMC3	1	11	0	1	13	12
TMC7	0	4	0	0	4	4
TMCO2	0	0	0	1	1	1
TMCO3	0	9	0	0	9	9
TMCO4	0	0	0	1	1	1
TMED3	2	0	0	0	2	0
TMED4	1	0	0	0	1	0
TMEM104	3	1	0	0	4	1
TMEM115	0	0	0	1	1	1
TMEM120A	0	0	4	0	4	0
TMEM132B	0	2	0	0	2	2
TMEM132E	0	0	0	1	1	1
TMEM133	0	0	0	2	2	2
TMEM144	1	0	0	0	1	0
TMEM145	0	0	0	2	2	2
TMEM146	1	1	0	0	2	1
TMEM150A	0	0	0	1	1	1
TMEM150C	0	3	0	4	7	7
TMEM159	0	0	0	2	2	2
TMEM161B	0	0	0	1	1	1
TMEM168	0	1	0	0	1	1
TMEM170A	0	0	0	1	1	1
TMEM171	0	1	0	0	1	1
TMEM176B	1	1	0	0	2	1
TMEM177	0	9	0	1	10	10
TMEM179B	0	1	0	2	3	3
TMEM18	1	0	0	0	1	0
TMEM180	0	0	0	3	3	3

TMEM194A	0	0	0	1	1	1
TMEM198	0	0	0	2	2	2
TMEM200A	0	0	0	2	2	2
TMEM206	0	0	0	3	3	3
TMEM209	2	0	0	0	2	0
TMEM214	0	1	0	1	2	2
TMEM27	0	1	0	0	1	1
TMEM31	0	0	0	1	1	1
TMEM38A	0	0	0	1	1	1
TMEM44	1	0	0	0	1	0
TMEM48	0	0	0	3	3	3
TMEM54	0	0	0	2	2	2
TMEM59	1	1	0	0	2	1
TMEM60	0	0	0	1	1	1
TMEM61	0	1	0	0	1	1
TMEM62	0	0	0	2	2	2
TMEM63B	0	0	0	1	1	1
TMEM63C	0	0	0	1	1	1
TMEM71	0	0	0	1	1	1
TMEM72	0	1	0	0	1	1
TMEM79	0	0	0	1	1	1
TMEM81	0	2	0	0	2	2
TMEM82	0	0	0	2	2	2
TMEM85	0	0	0	1	1	1
TMEM87A	1	0	0	0	1	0
TMEM87B	0	0	0	1	1	1
TMEM8C	0	0	0	1	1	1
TMEM9	0	0	0	5	5	5
TMEM97	0	0	1	2	3	2
TMEM99	0	0	0	1	1	1
TMIE	1	0	0	0	1	0
TMLHE	0	2	0	0	2	2
TMOD2	0	0	0	1	1	1
TMOD3	1	2	0	0	3	2
TMPRSS11A	0	0	0	1	1	1
TMPRSS11B	1	2	0	0	3	2
TMPRSS11D	0	1	0	0	1	1
TMPRSS12	0	1	0	0	1	1
TMPRSS13	0	0	0	6	6	6
TMPRSS15	1	2	0	0	3	2
TMPRSS3	0	0	0	1	1	1
TMPRSS4	0	1	0	0	1	1
TMPRSS6	0	0	0	1	1	1
TMPRSS7	3	2	0	0	5	2
TMPRSS9	0	0	0	1	1	1

TMTC1	0	0	0	2	2	2
TNC	1	0	0	0	1	0
TNF	0	0	0	1	1	1
TNFAIP3	0	1	0	0	1	1
TNFAIP6	0	0	1	0	1	0
TNFAIP8L3	0	1	0	0	1	1
TNFRSF10A	0	0	2	0	2	0
TNFRSF10B	2	0	0	0	2	0
TNFRSF10C	0	0	0	3	3	3
TNFRSF10D	0	1	0	0	1	1
TNFRSF11B	0	1	0	0	1	1
TNFRSF13B	0	0	0	2	2	2
TNFRSF1A	0	0	0	1	1	1
TNFRSF25	1	0	0	0	1	0
TNFRSF8	0	0	0	1	1	1
TNFSF15	0	0	0	4	4	4
TNFSF18	0	3	0	2	5	5
TNIP3	1	0	0	0	1	0
TNK1	16	1	0	1	18	2
TNKS	1	1	0	0	2	1
TNNC2	0	0	0	1	1	1
TNNI2	0	0	1	0	1	0
TNNT2	5	0	0	0	5	0
TNRC18	0	0	0	1	1	1
TNRC6A	1	0	0	0	1	0
TNRC6C	0	0	0	1	1	1
TNS1	0	1	0	0	1	1
TNS4	8	0	0	0	8	0
TOB1	0	0	0	1	1	1
TOE1	0	0	0	1	1	1
TOM1	0	0	0	17	17	17
TOM1L1	0	0	0	2	2	2
TONSL	0	0	0	1	1	1
TOP2A	0	1	0	11	12	12
TOP2B	1	0	0	0	1	0
TOP3B	0	0	0	1	1	1
TOPORS	0	0	0	1	1	1
TOR1AIP1	1	0	0	2	3	2
TOR1AIP2	0	0	0	1	1	1
TOR3A	0	0	0	1	1	1
TP53AIP1	0	1	0	5	6	6
TP53BP1	0	0	0	1	1	1
TP63	1	0	0	0	1	0
TPCN1	0	0	0	1	1	1
TPCN2	0	0	0	1	1	1

TPD52L3	0	0	0	2	2	2
TPH2	0	0	0	3	3	3
TPP1	1	0	0	0	1	0
TPPP2	0	4	0	1	5	5
TPR	0	0	0	1	1	1
TPRG1	10	0	0	0	10	0
TPRG1L	0	1	0	0	1	1
TPTE	6	4	0	0	10	4
TPTE2	1	1	0	0	2	1
TRAF5	0	0	0	1	1	1
TRAFD1	0	1	0	0	1	1
TRAK1	0	0	0	4	4	4
TRAK2	0	1	0	1	2	2
TRANK1	0	0	0	5	5	5
TRAPPC10	0	0	0	1	1	1
TRAPPC8	1	0	0	0	1	0
TRAPPC9	0	0	0	1	1	1
TREH	1	0	0	0	1	0
TREML1	0	1	0	0	1	1
TREML4	0	0	0	4	4	4
TREX1	0	0	0	1	1	1
TRIM11	0	0	0	1	1	1
TRIM13	0	0	0	1	1	1
TRIM16	0	1	0	0	1	1
TRIM17	0	0	0	1	1	1
TRIM24	0	2	0	0	2	2
TRIM26	0	0	0	1	1	1
TRIM31	0	4	0	2	6	6
TRIM33	1	0	0	0	1	0
TRIM34	0	2	0	0	2	2
TRIM38	0	4	0	0	4	4
TRIM40	11	0	0	0	11	0
TRIM42	0	0	0	4	4	4
TRIM43	0	1	0	0	1	1
TRIM45	0	1	0	0	1	1
TRIM48	1	0	19	0	20	0
TRIM5	0	1	0	0	1	1
TRIM52	0	0	0	1	1	1
TRIM54	1	1	0	0	2	1
TRIM55	1	0	0	0	1	0
TRIM58	0	0	6	1	7	1
TRIM59	0	0	0	9	9	9
TRIM60	0	1	0	0	1	1
TRIM61	0	0	0	1	1	1
TRIM63	1	0	0	0	1	0

TRIM7	0	0	1	1	2	1
TRIM77P	0	0	0	1	1	1
TRIML1	0	0	0	1	1	1
TRIO	0	11	0	0	11	11
TRIP11	0	1	0	5	6	6
TRIP13	0	9	0	0	9	9
TRMT11	0	1	0	1	2	2
TRMT2A	0	0	0	3	3	3
TRMT5	0	0	0	2	2	2
TRMT61B	0	1	0	1	2	2
TRNAU1AP	0	0	0	2	2	2
TRNT1	0	1	0	2	3	3
TROVE2	0	0	0	1	1	1
TRPC1	0	1	0	2	3	3
TRPC4AP	1	0	0	0	1	0
TRPC6	3	0	0	1	4	1
TRPM2	0	2	0	0	2	2
TRPM3	0	0	0	8	8	8
TRPM4	1	2	0	0	3	2
TRPM8	0	1	0	0	1	1
TRPV3	0	0	0	1	1	1
TRPV4	0	0	0	1	1	1
TRPV5	0	0	0	1	1	1
TRUB2	0	0	0	1	1	1
TSC2	0	0	0	2	2	2
TSC22D1	1	0	0	0	1	0
TSGA10IP	0	1	0	1	2	2
TSGA13	0	1	0	0	1	1
TSHR	0	1	0	0	1	1
TSHZ1	0	0	0	1	1	1
TSHZ3	0	0	0	1	1	1
TSNARE1	0	0	0	1	1	1
TSNAXIP1	0	1	0	0	1	1
TSPAN10	0	0	0	19	19	19
TSPAN33	0	1	0	0	1	1
TSPAN4	0	1	0	0	1	1
TSPAN8	0	0	1	0	1	0
TSPEAR	0	0	0	3	3	3
TSPYL2	0	0	0	2	2	2
TSPYL6	0	0	0	1	1	1
TSR1	1	0	0	0	1	0
TSSC1	0	1	0	0	1	1
TSSK1B	0	0	0	2	2	2
TSSK2	0	1	0	0	1	1
TSSK3	0	1	0	0	1	1

TSTD2	1	1	0	0	2	1
TTBK2	0	1	0	0	1	1
TTC12	0	1	0	0	1	1
TTC13	0	1	0	0	1	1
TTC16	0	0	0	2	2	2
TTC18	7	0	0	0	7	0
TTC21A	0	2	0	1	3	3
TTC22	0	1	0	0	1	1
TTC23L	0	0	0	2	2	2
TTC24	0	0	0	8	8	8
TTC26	0	1	0	0	1	1
TTC29	0	0	0	1	1	1
TTC33	0	1	0	0	1	1
TTC37	0	1	0	1	2	2
TTC7A	0	0	0	1	1	1
TTC9B	0	0	0	1	1	1
TTC9C	0	10	0	0	10	10
TTF2	0	0	0	3	3	3
TTK	1	0	1	0	2	0
TTLL11	0	0	0	1	1	1
TTLL12	0	0	0	1	1	1
TTLL3	0	1	0	8	9	9
TTLL4	0	0	0	1	1	1
TTLL5	1	0	0	1	2	1
TTLL6	0	0	0	3	3	3
TTN	2	59	3	5	69	64
TTYH3	0	0	0	1	1	1
TUB	0	4	0	0	4	4
TUBA3D	0	0	0	2	2	2
TUBA3E	0	0	0	1	1	1
TUBB1	0	3	0	0	3	3
TUBB2B	0	0	0	1	1	1
TUBG1	0	1	0	0	1	1
TUBGCP2	0	0	0	1	1	1
TULP2	0	6	0	1	7	7
TULP3	3	0	0	0	3	0
TULP4	0	1	0	0	1	1
TUSC3	0	0	0	1	1	1
TWISTNB	0	4	0	1	5	5
TXLNG	0	0	0	1	1	1
TXNDC11	0	3	0	0	3	3
TXNDC16	4	0	0	0	4	0
TXNRD3NB	0	0	0	3	3	3
TYK2	0	0	0	4	4	4
TYROBP	1	0	0	1	2	1

TYRP1	0	2	0	0	2	2
TYW1B	0	1	0	0	1	1
TYW3	0	0	0	1	1	1
U2AF1L4	0	0	0	1	1	1
UBA3	0	0	0	1	1	1
UBA7	0	1	0	1	2	2
UBAP2	0	0	0	15	15	15
UBE2D1	7	0	0	0	7	0
UBE2E2	0	1	0	0	1	1
UBE2U	0	1	0	0	1	1
UBE3C	0	0	0	1	1	1
UBE4B	0	0	0	2	2	2
UBL4B	0	2	0	0	2	2
UBN1	0	0	0	2	2	2
UBQLNL	0	3	0	0	3	3
UBR2	0	0	0	1	1	1
UBR3	0	1	0	0	1	1
UBR4	0	0	0	7	7	7
UBTF	0	1	0	0	1	1
UBXN10	0	1	0	0	1	1
UBXN11	0	0	0	22	22	22
UBXN7	0	1	0	0	1	1
UBXN8	0	1	0	1	2	2
UCK1	0	0	0	1	1	1
UCP3	2	0	0	0	2	0
UFSP1	0	0	1	0	1	0
UGGT1	0	0	0	1	1	1
UGGT2	1	0	0	2	3	2
UGT1A1	0	0	0	1	1	1
UGT1A10	0	1	0	0	1	1
UGT1A3	0	0	0	2	2	2
UGT1A5	0	0	0	1	1	1
UGT1A7	1	0	0	0	1	0
UGT1A9	0	1	0	0	1	1
UGT2B17	0	0	0	1	1	1
UGT2B28	0	0	0	3	3	3
UGT2B4	0	0	0	1	1	1
UGT2B7	0	1	0	0	1	1
UGT8	0	0	0	1	1	1
UHMK1	0	0	0	1	1	1
UHRF1	0	4	0	0	4	4
UHRF1BP1	0	1	0	1	2	2
ULBP3	0	2	0	0	2	2
ULK1	0	0	0	1	1	1
ULK4	0	1	0	1	2	2

UMOD	0	1	0	0	1	1
UMODL1	1	1	0	0	2	1
UMPS	0	0	0	1	1	1
UNC13A	14	0	0	0	14	0
UNC13B	0	0	0	1	1	1
UNC13C	0	2	0	5	7	7
UNC13D	2	0	0	1	3	1
UNC45A	1	0	0	0	1	0
UNC5CL	1	0	0	0	1	0
UNC80	0	2	0	2	4	4
UNC93A	9	3	0	0	12	3
UPB1	4	0	0	1	5	1
UPF1	0	0	0	1	1	1
UPK2	1	0	0	0	1	0
UPK3A	1	2	0	0	3	2
UPP2	0	0	0	4	4	4
UQCRB	0	1	0	0	1	1
URB1	0	0	0	1	1	1
URB2	0	0	0	1	1	1
USH1C	0	14	0	1	15	15
USH2A	2	18	0	1	21	19
USHBP1	0	0	0	1	1	1
USP17L2	0	0	0	2	2	2
USP19	0	0	0	2	2	2
USP20	0	0	0	1	1	1
USP21	0	0	0	1	1	1
USP25	1	0	0	0	1	0
USP27X	0	0	0	1	1	1
USP29	0	3	0	0	3	3
USP32	0	1	0	1	2	2
USP34	1	0	0	1	2	1
USP35	0	1	0	1	2	2
USP38	0	0	0	1	1	1
USP4	0	1	0	0	1	1
USP40	0	1	1	2	4	3
USP42	0	0	0	2	2	2
USP45	11	3	0	1	15	4
USP50	0	0	0	1	1	1
USP54	0	1	0	0	1	1
USP6	1	2	0	1	4	3
USP9X	0	1	0	0	1	1
UTP14C	0	3	0	1	4	4
UTP20	2	0	0	0	2	0
UTRN	1	1	0	7	9	8
UTS2D	0	1	0	1	2	2

VAC14	0	3	0	0	3	3
VARS2	0	0	0	2	2	2
VAV3	0	1	0	0	1	1
VAX1	0	0	0	1	1	1
VAX2	0	1	0	0	1	1
VCL	0	0	2	0	2	0
VCPIP1	0	0	0	1	1	1
VEGFB	0	0	0	1	1	1
VENTX	0	1	0	0	1	1
VEPH1	0	1	0	0	1	1
VGLL1	0	6	0	0	6	6
VGLL3	0	0	0	1	1	1
VIL1	9	0	0	2	11	2
VILL	0	1	0	1	2	2
VIM	0	0	4	0	4	0
VIP	0	1	0	1	2	2
VIT	0	13	0	1	14	14
VN1R4	0	0	0	10	10	10
VNN1	0	1	4	0	5	1
VPRBP	1	0	0	0	1	0
VPREB1	1	0	1	0	2	0
VPREB3	0	0	1	0	1	0
VPS11	0	5	0	0	5	5
VPS13A	0	1	0	0	1	1
VPS13B	0	1	0	2	3	3
VPS13C	0	1	0	3	4	4
VPS16	0	0	0	1	1	1
VPS35	0	1	0	1	2	2
VPS39	0	0	0	1	1	1
VPS4A	0	0	0	1	1	1
VPS4B	1	0	0	0	1	0
VPS8	0	0	0	1	1	1
VRK3	0	1	0	0	1	1
VRTN	0	0	0	2	2	2
VSIG10L	0	0	0	11	11	11
VSTM1	0	0	1	0	1	0
VWA3A	1	2	0	0	3	2
VWA3B	0	1	0	2	3	3
VWCE	0	1	0	0	1	1
VWDE	0	14	0	0	14	14
VWF	0	0	0	1	1	1
WASL	0	0	0	1	1	1
WBSCR28	0	2	0	0	2	2
WDFY3	0	0	0	6	6	6
WDFY4	0	1	0	0	1	1

WDHD1	0	1	0	0	1	1
WDR11	0	0	0	1	1	1
WDR16	1	0	0	1	2	1
WDR17	1	0	0	5	6	5
WDR18	0	0	0	1	1	1
WDR27	9	0	0	7	16	7
WDR3	0	1	0	2	3	3
WDR31	0	1	0	0	1	1
WDR33	1	0	0	0	1	0
WDR35	2	1	0	0	3	1
WDR49	0	0	0	1	1	1
WDR5B	0	0	0	1	1	1
WDR6	0	0	0	2	2	2
WDR62	0	5	0	0	5	5
WDR63	1	0	0	0	1	0
WDR64	0	0	0	1	1	1
WDR65	0	0	0	1	1	1
WDR66	1	2	0	0	3	2
WDR67	0	1	0	1	2	2
WDR72	0	8	0	0	8	8
WDR78	0	1	0	3	4	4
WDR83	0	0	0	3	3	3
WDR85	0	0	0	3	3	3
WDR87	0	1	0	0	1	1
WDR89	0	1	0	0	1	1
WDR91	0	1	0	1	2	2
WDR93	1	0	0	1	2	1
WDR96	0	3	0	0	3	3
WDTC1	0	0	0	1	1	1
WFDC8	0	0	0	2	2	2
WHSC1	0	0	0	1	1	1
WIP1	0	1	0	0	1	1
WNK1	0	0	0	4	4	4
WNK3	0	3	0	0	3	3
WNK4	0	0	0	5	5	5
WNT10A	0	1	0	0	1	1
WNT11	0	1	0	0	1	1
WNT16	0	0	0	1	1	1
WRAP53	0	0	0	11	11	11
WRAP73	0	1	0	0	1	1
WRN	0	2	0	0	2	2
WSB2	0	0	0	1	1	1
WT1	1	0	0	0	1	0
WTH3DI	0	0	0	2	2	2
WWC1	1	0	0	0	1	0

WWC3	0	0	0	4	4	4
XAF1	0	2	0	0	2	2
XDH	2	0	0	0	2	0
XG	0	1	0	0	1	1
XIRP1	0	1	0	0	1	1
XK	0	0	0	1	1	1
XKR6	0	3	0	0	3	3
XKR8	0	1	0	0	1	1
XKR9	0	1	0	0	1	1
XKRX	13	0	0	0	13	0
XPC	1	0	0	7	8	7
XPNPEP3	0	0	0	2	2	2
XPO1	0	0	0	1	1	1
XPOT	0	0	0	2	2	2
XRRRA1	0	1	0	1	2	2
XYL2	1	0	0	0	1	0
YARS2	2	0	0	2	4	2
YBEY	0	0	0	1	1	1
YBX2	0	0	0	1	1	1
YEATS2	0	0	0	4	4	4
YES1	0	0	0	5	5	5
YIF1B	0	0	0	1	1	1
YIPF1	2	0	0	1	3	1
YIPF7	0	1	0	0	1	1
YSK4	1	0	0	0	1	0
YTHDF1	0	2	0	1	3	3
YTHDF2	0	0	0	1	1	1
YTHDF3	0	0	0	1	1	1
YWHAB	0	0	0	1	1	1
YY1AP1	0	0	0	1	1	1
ZACN	0	0	0	1	1	1
ZAN	5	23	0	7	35	30
ZBBX	1	0	0	1	2	1
ZBP1	0	3	0	1	4	4
ZBTB2	0	0	0	2	2	2
ZBTB37	0	0	0	1	1	1
ZBTB39	0	0	0	1	1	1
ZBTB4	0	0	0	3	3	3
ZBTB41	0	1	0	0	1	1
ZBTB45	0	0	0	4	4	4
ZBTB7C	0	0	0	1	1	1
ZBTB9	0	1	0	0	1	1
ZC3H10	0	0	0	1	1	1
ZC3H11A	0	1	0	0	1	1
ZC3H12A	0	0	0	1	1	1

ZC3H12C	0	0	0	1	1	1
ZC3H12D	0	0	0	1	1	1
ZC3H14	0	0	0	1	1	1
ZC3H15	0	0	0	1	1	1
ZC3H18	0	0	0	2	2	2
ZC3H6	0	0	0	2	2	2
ZCCHC13	0	0	0	1	1	1
ZCCHC16	0	1	0	0	1	1
ZCCHC18	0	0	0	1	1	1
ZCCHC4	0	0	1	3	4	3
ZCRB1	0	1	0	1	2	2
ZCWPW2	0	0	0	1	1	1
ZDBF2	0	0	0	1	1	1
ZDHHC1	0	0	0	1	1	1
ZDHHC13	1	0	0	0	1	0
ZDHHC4	1	0	0	0	1	0
ZDHHC8	0	0	0	2	2	2
ZEB2	0	11	0	0	11	11
ZFHX3	0	2	0	0	2	2
ZFHX4	0	0	0	1	1	1
ZFP37	0	1	0	1	2	2
ZFP41	0	0	1	0	1	0
ZFP91	1	0	0	0	1	0
ZFR	0	0	2	1	3	1
ZFR2	0	0	0	1	1	1
ZFYVE16	0	0	0	1	1	1
ZFYVE19	0	0	0	11	11	11
ZFYVE20	0	0	0	1	1	1
ZFYVE26	0	1	0	1	2	2
ZFYVE9	0	11	0	0	11	11
ZHX2	0	0	0	3	3	3
ZHX3	0	0	0	3	3	3
ZIK1	0	0	0	2	2	2
ZIM3	0	11	0	1	12	12
ZKSCAN1	0	1	0	0	1	1
ZKSCAN3	0	0	0	1	1	1
ZKSCAN4	0	0	0	4	4	4
ZMIZ1	0	1	0	1	2	2
ZMIZ2	0	0	0	1	1	1
ZMYM1	0	1	0	0	1	1
ZMYM3	0	2	0	0	2	2
ZMYM4	3	0	0	0	3	0
ZMYM5	0	2	0	0	2	2
ZMYND10	0	2	0	0	2	2
ZMYND12	0	1	0	2	3	3

ZMYND15	3	0	0	1	4	1
ZMYND17	0	0	0	4	4	4
ZMYND19	0	0	0	1	1	1
ZNF100	0	8	0	1	9	9
ZNF107	0	0	0	7	7	7
ZNF114	0	0	0	1	1	1
ZNF133	0	0	0	1	1	1
ZNF135	0	0	0	1	1	1
ZNF140	0	0	0	4	4	4
ZNF142	0	0	0	2	2	2
ZNF148	0	1	0	0	1	1
ZNF154	0	7	0	0	7	7
ZNF155	0	0	0	1	1	1
ZNF175	0	0	0	3	3	3
ZNF182	0	0	0	1	1	1
ZNF19	0	0	0	1	1	1
ZNF2	0	0	0	2	2	2
ZNF211	0	2	0	0	2	2
ZNF212	0	2	0	0	2	2
ZNF215	1	0	0	0	1	0
ZNF221	0	0	0	2	2	2
ZNF222	0	0	0	1	1	1
ZNF223	0	4	0	0	4	4
ZNF224	0	1	0	1	2	2
ZNF227	0	0	0	2	2	2
ZNF229	0	1	0	3	4	4
ZNF233	0	1	0	0	1	1
ZNF238	0	1	0	0	1	1
ZNF253	0	2	0	0	2	2
ZNF254	0	1	0	0	1	1
ZNF256	1	0	0	0	1	0
ZNF260	0	0	0	1	1	1
ZNF267	0	1	0	0	1	1
ZNF273	0	1	0	2	3	3
ZNF277	0	0	0	1	1	1
ZNF28	0	1	0	7	8	8
ZNF280A	0	0	0	1	1	1
ZNF281	0	0	0	1	1	1
ZNF286A	0	0	0	1	1	1
ZNF286B	0	4	0	0	4	4
ZNF292	0	0	0	2	2	2
ZNF295	0	0	0	1	1	1
ZNF300	0	0	0	1	1	1
ZNF302	0	1	0	0	1	1
ZNF318	0	0	0	1	1	1

ZNF323	0	0	0	2	2	2
ZNF334	0	0	0	1	1	1
ZNF335	0	0	0	3	3	3
ZNF33B	0	0	0	1	1	1
ZNF341	0	0	0	1	1	1
ZNF343	3	0	0	0	3	0
ZNF345	0	2	0	0	2	2
ZNF347	0	0	0	17	17	17
ZNF35	0	0	0	1	1	1
ZNF417	0	4	0	0	4	4
ZNF423	0	0	0	1	1	1
ZNF425	0	1	0	1	2	2
ZNF429	0	2	0	8	10	10
ZNF431	1	0	0	0	1	0
ZNF433	0	1	0	1	2	2
ZNF434	0	1	0	0	1	1
ZNF439	1	2	0	0	3	2
ZNF440	0	5	0	1	6	6
ZNF442	0	1	1	0	2	1
ZNF443	0	1	0	0	1	1
ZNF446	0	0	0	1	1	1
ZNF45	0	1	0	1	2	2
ZNF461	0	0	0	1	1	1
ZNF462	0	6	0	0	6	6
ZNF471	0	0	0	1	1	1
ZNF473	0	1	0	0	1	1
ZNF479	0	0	0	1	1	1
ZNF486	0	4	0	1	5	5
ZNF488	0	0	0	2	2	2
ZNF491	0	3	0	0	3	3
ZNF496	0	1	0	2	3	3
ZNF501	0	0	0	1	1	1
ZNF506	0	0	0	5	5	5
ZNF513	0	0	0	3	3	3
ZNF514	0	1	0	0	1	1
ZNF516	0	0	0	1	1	1
ZNF519	0	0	0	1	1	1
ZNF521	0	0	0	1	1	1
ZNF526	0	0	0	1	1	1
ZNF528	0	2	0	1	3	3
ZNF530	0	0	0	1	1	1
ZNF534	0	1	0	1	2	2
ZNF543	1	5	0	0	6	5
ZNF544	1	12	0	0	13	12
ZNF546	0	3	0	2	5	5

ZNF547	0	1	0	0	1	1
ZNF549	0	1	0	0	1	1
ZNF551	0	1	0	0	1	1
ZNF552	0	3	0	0	3	3
ZNF554	0	0	0	1	1	1
ZNF556	1	1	0	0	2	1
ZNF558	0	0	0	1	1	1
ZNF561	0	4	0	1	5	5
ZNF563	0	5	0	0	5	5
ZNF567	0	0	0	1	1	1
ZNF568	0	1	0	0	1	1
ZNF569	0	0	0	1	1	1
ZNF57	0	1	0	0	1	1
ZNF571	0	1	0	0	1	1
ZNF572	0	0	0	1	1	1
ZNF573	0	0	0	1	1	1
ZNF582	0	0	0	1	1	1
ZNF587	0	4	0	2	6	6
ZNF594	0	2	0	4	6	6
ZNF595	0	0	0	1	1	1
ZNF596	0	1	0	0	1	1
ZNF599	0	2	1	9	12	11
ZNF607	0	1	0	0	1	1
ZNF608	0	0	0	1	1	1
ZNF611	0	0	0	1	1	1
ZNF613	0	0	0	1	1	1
ZNF616	0	2	0	0	2	2
ZNF618	0	0	0	2	2	2
ZNF619	0	1	0	0	1	1
ZNF620	0	0	0	1	1	1
ZNF622	0	1	0	0	1	1
ZNF642	2	0	0	0	2	0
ZNF643	0	1	0	0	1	1
ZNF645	0	0	0	1	1	1
ZNF646	0	0	0	1	1	1
ZNF648	0	0	0	1	1	1
ZNF655	0	1	0	0	1	1
ZNF660	0	0	0	1	1	1
ZNF662	0	1	0	0	1	1
ZNF664	0	1	0	0	1	1
ZNF665	0	1	0	0	1	1
ZNF667	0	0	0	1	1	1
ZNF674	0	1	0	2	3	3
ZNF675	0	0	0	2	2	2
ZNF676	1	0	0	0	1	0

ZNF677	1	0	0	1	2	1
ZNF678	0	2	0	1	3	3
ZNF681	0	1	0	2	3	3
ZNF682	0	0	0	1	1	1
ZNF683	0	0	0	1	1	1
ZNF687	0	8	0	0	8	8
ZNF689	0	1	0	1	2	2
ZNF691	0	0	0	4	4	4
ZNF709	0	0	0	1	1	1
ZNF714	0	0	0	1	1	1
ZNF717	0	26	0	91	117	117
ZNF718	0	0	0	2	2	2
ZNF721	0	0	0	3	3	3
ZNF727	4	2	0	0	6	2
ZNF732	0	1	0	0	1	1
ZNF736	0	1	0	0	1	1
ZNF737	0	0	0	1	1	1
ZNF749	0	0	0	5	5	5
ZNF75A	0	1	0	0	1	1
ZNF75D	0	2	0	1	3	3
ZNF77	0	0	0	1	1	1
ZNF772	0	5	0	0	5	5
ZNF773	1	0	0	0	1	0
ZNF774	0	0	0	1	1	1
ZNF776	1	0	0	1	2	1
ZNF777	0	0	0	1	1	1
ZNF778	0	0	0	1	1	1
ZNF780B	8	0	0	0	8	0
ZNF782	0	0	0	1	1	1
ZNF785	0	0	0	2	2	2
ZNF786	0	1	0	0	1	1
ZNF79	0	1	0	0	1	1
ZNF790	0	7	0	1	8	8
ZNF792	0	1	0	5	6	6
ZNF793	0	0	0	1	1	1
ZNF80	0	3	0	5	8	8
ZNF804A	0	0	0	4	4	4
ZNF808	0	3	0	1	4	4
ZNF812	0	2	0	5	7	7
ZNF813	0	0	0	8	8	8
ZNF816	0	0	0	1	1	1
ZNF816- ZNF321P	0	0	0	2	2	2
ZNF823	0	1	0	0	1	1
ZNF827	0	0	0	1	1	1

ZNF83	0	3	0	0	3	3
ZNF835	0	1	0	4	5	5
ZNF839	0	0	0	1	1	1
ZNF844	0	1	0	9	10	10
ZNF846	0	1	0	1	2	2
ZNF85	0	0	0	1	1	1
ZNF860	0	18	0	0	18	18
ZNF862	0	1	0	0	1	1
ZNF879	3	0	0	0	3	0
ZNF883	0	1	0	1	2	2
ZNF90	0	0	0	2	2	2
ZNF93	0	0	0	1	1	1
ZNF99	0	2	0	1	3	3
ZNHIT3	0	0	0	1	1	1
ZNHIT6	1	0	0	0	1	0
ZP1	0	0	0	3	3	3
ZP2	0	1	0	0	1	1
ZP3	0	0	0	10	10	10
ZP4	0	1	0	0	1	1
ZRANB3	5	0	0	0	5	0
ZSCAN1	0	0	0	1	1	1
ZSCAN16	0	1	0	0	1	1
ZSCAN22	0	1	0	1	2	2
ZSCAN5B	0	0	0	1	1	1
ZSWIM1	0	5	0	0	5	5
ZSWIM2	0	1	0	0	1	1
ZSWIM3	0	0	0	1	1	1
ZSWIM4	2	0	0	0	2	0
ZSWIM6	0	0	0	1	1	1
ZSWIM7	0	0	0	1	1	1
ZUFSP	0	1	0	0	1	1
ZWINT	0	0	0	2	2	2
ZXDA	0	1	0	0	1	1
ZXDB	0	0	0	1	1	1
ZXDC	1	0	0	0	1	0

Supplementary Table 2b: Details of protein truncating mutations identified in TCGA HGSOC cases

Frequency	Gene	exon	Type	cDNA
1	A1BG	Exon5	frameshift deletion	c.760delA
1	A1BG	Exon5	frameshift deletion	c.751delC
1	A2ML1	Exon4	splicing	c.462+1G>C
1	A2ML1	Exon12	frameshift deletion	c.1444_1445delAG
1	A2M	Exon2	frameshift deletion	c.202delA
1	A4GALT	Exon3	frameshift deletion	c.845delA
1	A4GALT	Exon3	frameshift insertion	c.839_840insT
2	A4GNT	Exon3	stopgain SNV	c.796C>T
1	AACS	Exon6	stopgain SNV	c.670C>T
1	AACS	Exon17	frameshift deletion	c.1723delT
1	AADACL2	Exon4	stopgain SNV	c.559G>T
16	AADACL3	Exon3	frameshift deletion	c.374delG
1	AADAC	Exon5	frameshift deletion	c.720delT
5	AADAC	Exon5	stoploss SNV	c.1198T>C
1	AAGAB	Exon10	stopgain SNV	c.887G>A
1	AAK1	Exon16	stopgain SNV	c.2176G>T
1	AAMP	Exon10	frameshift deletion	c.1090delC
3	AARS2	Exon2	frameshift insertion	c.267dupC
1	AARSD1	Exon7	stopgain SNV	c.646C>T
3	AASDH	Exon8	frameshift deletion	c.1319delT
1	AASDH	Exon3	frameshift deletion	c._del
1	AATF	Exon4	splicing	c.832+2dupT
10	ABCA10	Exon32	frameshift insertion	c.3689_3696dupTTCCAGGT
2	ABCA10	Exon31	frameshift deletion	c.3685_3686delGT
1	ABCA10	Exon20	frameshift deletion	c.2170delA
2	ABCA10	Exon17	stopgain SNV	c.1843C>T
3	ABCA10	Exon16	stopgain SNV	c.1729C>T
13	ABCA10	Exon14	frameshift deletion	c.1357_1358delAT
5	ABCA10	Exon9	stopgain SNV	c.783T>A

1	ABCA13	Exon6	stoploss SNV	c.631delT
4	ABCA13	Exon10	stoploss SNV	c.1288T>A
1	ABCA13	Exon11	stopgain SNV	c.1336C>T
9	ABCA13	Exon15	stoploss SNV	c.3830A>G
9	ABCA13	Exon15	stoploss SNV	c.5503T>A
1	ABCA13	Exon15	stoploss SNV	c.5503T>G
8	ABCA13	Exon15	stopgain SNV	c.6298C>T
8	ABCA13	Exon15	stoploss SNV	c.6472T>C
1	ABCA13	Exon16	stoploss SNV	c.7546T>C
1	ABCA13	Exon16	frameshift deletion	c.7880_7881delAG
1	ABCA13	Exon16	frameshift insertion	c.7884_7885insT
3	ABCA13	Exon21	stoploss SNV	c.9058T>A
1	ABCA13	Exon22	stopgain SNV	c.9225C>A
1	ABCA13	Exon30	splicing	c.10526-2A>G
1	ABCA13	Exon39	splicing	c.12296+1G>T
9	ABCA13	Exon48	stopgain SNV	c.13227C>A
1	ABCA13	Exon52	stopgain SNV	c.14032A>T
1	ABCA4	Exon23	frameshift insertion	c.3395dupT
1	ABCA5	Exon6	stopgain SNV	c.742delA
1	ABCA6	Exon13	frameshift deletion	c.1712_1715delTCAC
1	ABCA6	Exon4	frameshift deletion	c.321_322delAC
1	ABCA8	Exon27	frameshift deletion	c.3576delT
2	ABCA8	Exon17	stopgain SNV	c.2219_2220dupTG
1	ABCA9	Exon38	splicing	c.4641-1G>A
1	ABCA9	Exon9	frameshift deletion	c.1275delC
4	ABCA9	Exon8	splicing	c.942+2T>C
1	ABCA9	Exon6	stopgain SNV	c.784C>T
1	ABCA9	Exon6	stopgain SNV	c.739C>T
1	ABCB10	Exon10	frameshift deletion	c.1821_1822delTG
1	ABCB10	Exon9	stopgain SNV	c.1723C>T
1	ABCB10	Exon8	frameshift insertion	c.1572_1573insG
3	ABCB11	Exon25	frameshift deletion	c.3244_3245delGA

12	ABCB5	Exon3	splicing	c.108+1G>C
1	ABCB5	Exon6	stopgain SNV	c.400C>T
1	ABCB5	Exon28	stopgain SNV	c.3583C>T
1	ABCB6	Exon7	frameshift deletion	c.1369_1370delCT
13	ABCB7	Exon3	splicing	c.249+1G>A
1	ABCB9	Exon6	frameshift deletion	c.1228delA
5	ABCC10	Exon3	frameshift deletion	c.1257delA
7	ABCC11	Exon29	splicing	c.3778-1G>A
3	ABCC11	Exon21	stopgain SNV	c.2813C>G
12	ABCC12	Exon22	stopgain SNV	c.3071G>A
1	ABCC12	Exon20	frameshift deletion	c.2704_2708delACGAC
2	ABCC12	Exon19	stopgain SNV	c.2491C>T
4	ABCC12	Exon18	frameshift deletion	c.2425delG
2	ABCC12	Exon13	frameshift deletion	c.1888_1889delCT
1	ABCC12	Exon4	stopgain SNV	c.490G>T
3	ABCC12	Exon2	frameshift deletion	c.197_198delAA
4	ABCC1	Exon20	stopgain SNV	c.2592T>G
1	ABCC1	Exon20	frameshift insertion	c.2610dupG
1	ABCC1	Exon23	splicing	c.3223-2_3223-2delA
2	ABCC2	Exon28	stopgain SNV	c.3928C>T
1	ABCC4	Exon3	frameshift insertion	c.305_306insC
5	ABCC5	Exon20	frameshift deletion	c.2855_2856delTC
1	ABCC5	Exon16	stopgain SNV	c.2318T>G
1	ABCC6	Exon8	stopgain SNV	c.913C>T
2	ABCC9	Exon19	splicing	c.2238-1G>A
1	ABCD3	Exon3	frameshift deletion	c.163delG
3	ABCE1	Exon9	frameshift deletion	c.750delG
3	ABCF1	Exon15	stopgain SNV	c.1418T>A
1	ABCF3	Exon17	frameshift insertion	c.1585_1586insA
1	ABCF3	Exon17	frameshift insertion	c.1587dupT
1	ABCF3	Exon19	splicing	c.1883+2T>G
1	ABCG2	Exon7	stopgain SNV	c.736C>T
1	ABCG2	Exon4	stopgain	c.337C>T

			SNV	
1	ABCG4	Exon3	frameshift deletion	c.239delG
2	ABCG8	Exon7	stopgain SNV	c.1083G>A
3	ABHD12B	Exon3	splicing	c.255+1G>T
1	ABHD12B	Exon4	stopgain SNV	c.297C>G
1	ABHD12B	Exon8	frameshift deletion	c.589delG
1	ABHD12	Exon12	stopgain SNV	c.1063C>T
3	ABHD14B	Exon3	frameshift insertion	c.314dupC
1	ABHD14B	Exon2	stopgain SNV	c.49C>T
1	ABHD2	Exon8	frameshift insertion	c.323dupC
1	ABHD3	Exon7	splicing	c.669-1G>A
1	ABHD3	Exon4	frameshift deletion	c.544delG
1	ABLIM1	Exon5	splicing	c.493+-1_493+1dupCAG
2	ABO	Exon7	frameshift deletion	c.1060delC
1	ABO	Exon5	frameshift deletion	c.223_224delAA
1	ABP1	Exon4	frameshift deletion	c.1878_1879delGT
1	ABTB1	Exon10	stopgain SNV	c.916C>T
1	ABTB2	Exon9	stopgain SNV	c.1860T>A
1	ABTB2	Exon2	frameshift deletion	c.895delC
1	ACACA	Exon22	stopgain SNV	c.2107G>T
1	ACACA	Exon16	frameshift insertion	c.1364_1365insG
3	ACACB	Exon18	frameshift deletion	c.2812delG
1	ACACB	Exon24	frameshift insertion	c.3581dupC
1	ACACB	Exon45	frameshift deletion	c.6287delT
1	ACACB	Exon51	stopgain SNV	c.7125G>A
1	ACAD10	Exon4	frameshift deletion	c.450delT
1	ACAD10	Exon11	stopgain SNV	c.1381C>T
1	ACAD11	Exon16	stopgain SNV	c.1819C>T
7	ACAD11	Exon12	splicing	c.1414+1G>T
3	ACAD11	Exon10	splicing	c.1071-1G>A
1	ACAD11	Exon8	stopgain SNV	c.1069C>T
1	ACAD11	Exon7	frameshift deletion	c.937_943delTATTTTA
7	ACAD11	Exon3	stopgain	c.321C>G

			SNV	
4	ACAD11	Exon2	frameshift deletion	c.247delC
1	ACAD9	Exon14	frameshift deletion	c.1430delG
1	ACADM	Exon4	frameshift insertion	c.244dupT
1	ACADVL	Exon11	splicing	c.1182+1G>A
1	ACAN	Exon6	frameshift deletion	c.907_908delGC
2	ACAN	Exon12	frameshift deletion	c.5912delC
1	ACBD4	Exon5	stopgain SNV	c.135C>G
1	ACCN1	Exon6	stopgain SNV	c.1057A>T
3	ACCN2	Exon4	stopgain SNV	c.676C>T
5	ACCN2	Exon5	stopgain SNV	c.826C>T
1	ACCN3	Exon1	stopgain SNV	c.235C>T
1	ACCN3	Exon7	stopgain SNV	c.1260delT
1	ACE	Exon22	frameshift deletion	c.3347delA
10	ACIN1	Exon6	frameshift deletion	c.1339delG
1	ACIN1	Exon6	frameshift deletion	c.1232delA
1	ACLY	Exon21	frameshift deletion	c.2414delA
2	ACLY	Exon3	splicing	c.159+2T>G
1	ACOT12	Exon10	stopgain SNV	c.1003G>T
1	ACOT13	Exon3	splicing	c.197+2dupT
1	ACOT1	Exon2	frameshift deletion	c.605delC
1	ACOT2	Exon1	frameshift insertion	c.65_66insA
1	ACOT4	Exon1	frameshift insertion	c.364dupC
7	ACOT4	Exon2	frameshift insertion	c.563_564insTCAA
1	ACOT6	Exon2	frameshift deletion	c.215_216delAA
1	ACOT6	Exon2	frameshift deletion	c.234delT
1	ACOT6	Exon2	frameshift deletion	c.340delA
3	ACOT8	Exon2	frameshift insertion	c.207_208dupGT
1	ACOT8	Exon1	frameshift insertion	c.-1_2dupAGAT
1	ACOX2	Exon4	frameshift deletion	c.461_464delCAGA
1	ACOX3	Exon3	stopgain SNV	c.241C>T
3	ACOXL	Exon16	stopgain SNV	c.1407T>A

1	ACP6	Exon3	frameshift deletion	c.372delG
4	ACPL2	Exon8	frameshift deletion	c.580_581delGA
2	ACPP	Exon6	frameshift deletion	c.620_632del GTAAAGTCTACGA
1	ACSBG1	Exon9	frameshift deletion	c.1084delG
3	ACSBG2	Exon3	splicing	c.297+1G>A
1	ACSBG2	Exon8	frameshift deletion	c.775_779delAAACT
1	ACSBG2	Exon10	frameshift deletion	c.1305delT
1	ACSF3	Exon4	stopgain SNV	c.689G>A
1	ACSL5	Exon17	splicing	c.1477-13_1477-4del GTCTGCTGTG
1	ACSL6	Exon6	frameshift deletion	c.526delC
2	ACSM2A	Exon3	stopgain SNV	c.72C>G
6	ACSM2A	Exon4	stopgain SNV	c.343C>T
8	ACSM2A	Exon4	stopgain SNV	c.360G>A
1	ACSM3	Exon6	stopgain SNV	c.875G>A
6	ACSM3	Exon10	stopgain SNV	c.1323C>G
1	ACSM4	Exon1	frameshift deletion	c.56_72delCTGGCCGGCGCTTACAC
1	ACSM4	Exon2	stopgain SNV	c.208G>T
1	ACSM4	Exon2	stopgain SNV	c.295C>T
1	ACSM4	Exon3	splicing	c.413-1G>A
1	ACSM4	Exon3	stopgain SNV	c.472C>T
1	ACSM5	Exon2	frameshift deletion	c.54_57delATTC
11	ACSS2	Exon8	frameshift insertion	c.579_580dupGT
1	ACTA2	Exon2	frameshift insertion	c.105dupC
1	ACTL6A	Exon5	frameshift insertion	c.471_472insAT
1	ACTL7B	Exon1	frameshift deletion	c.736_739delGACG
1	ACTL9	Exon1	frameshift insertion	c.902dupT
1	ACTL9	Exon1	frameshift deletion	c.110delT
1	ACTN1	Exon18	stopgain SNV	c.2155C>T
5	ACTN1	Exon18	stopgain SNV	c.2152G>T
1	ACTN3	Exon21	stopgain SNV	c.2566G>T
1	ACTR1B	Exon9	stopgain SNV	c.937C>T

1	ACTR3C	Exon6	stopgain SNV	c.526C>T
3	ACTR3C	Exon5	stopgain SNV	c.361C>T
1	ACTR8	Exon6	frameshift deletion	c.725delA
1	ACTR8	Exon4	stopgain SNV	c.430C>T
4	ACTRT1	Exon1	frameshift insertion	c.547dupA
1	ACVRL1	Exon7	frameshift deletion	c.913delT
1	ACVRL1	Exon7	frameshift deletion	c.916delG
1	ADAD1	Exon10	splicing	c.1249+2T>C
1	ADAM18	Exon6	stopgain SNV	c.501C>G
1	ADAM18	Exon8	frameshift deletion	c.600_604delGGGAT
1	ADAM19	Exon21	frameshift deletion	c.2493delC
1	ADAM19	Exon21	frameshift insertion	c.2400_2401insAC
1	ADAM19	Exon2	stopgain SNV	c.118A>T
1	ADAM20	Exon2	frameshift insertion	c.688dupA
1	ADAM21	Exon2	frameshift deletion	c.151delA
1	ADAM22	Exon19	frameshift insertion	c.1593dupT
19	ADAM28	Exon6	frameshift deletion	c.536delA
1	ADAM29	Exon5	stopgain SNV	c.2020A>T
3	ADAM29	Exon5	stoploss SNV	c.2461T>C
7	ADAM2	Exon9	splicing	c.571-2A>T
1	ADAM30	Exon1	frameshift insertion	c.1865dupA
1	ADAM30	Exon1	frameshift insertion	c.844dupA
1	ADAM33	Exon3	frameshift deletion	c.237delT
1	ADAM7	Exon10	frameshift insertion	c.943dupT
1	ADAM7	Exon15	frameshift deletion	c.1562_1565delAGAG
8	ADAM8	Exon23	frameshift insertion	c.2456dupA
1	ADAM9	Exon4	stopgain SNV	c.291C>G
1	ADAMDEC1	Exon8	frameshift deletion	c.620delC
1	ADAMTS12	Exon10	splicing	c.1335-1G>C
1	ADAMTS15	Exon1	stopgain SNV	c.120C>A
1	ADAMTS15	Exon5	stopgain SNV	c.1557G>A
1	ADAMTS16	Exon3	stopgain	c.400A>T

			SNV	
1	ADAMTS18	Exon3	frameshift deletion	c.446_447delTC
1	ADAMTS20	Exon28	splicing	c.4107+2T>A
1	ADAMTS4	Exon5	stopgain SNV	c.1348C>T
2	ADAMTS7	Exon7	stopgain SNV	c.1072G>T
1	ADAMTS9	Exon11	splicing	c.1464-15_1464-6del TGTGTGTTTC
8	ADAMTSL1	Exon11	frameshift insertion	c.1184dupG
1	ADAMTSL3	Exon7	frameshift deletion	c.679delT
1	ADAMTSL3	Exon21	frameshift deletion	c.3355_3356delCC
1	ADAMTSL3	Exon21	frameshift deletion	c.3371delT
1	ADAMTSL3	Exon30	stoploss SNV	c.5074T>C
2	ADAMTSL4	Exon6	frameshift deletion	c.767_786del AGGCCTCTGGCACAGAGCCC
1	ADAMTSL4	Exon12	frameshift insertion	c.1914_1915insT
1	ADAMTSL4	Exon15	frameshift deletion	c.2554delT
1	ADA	Exon10	frameshift deletion	c.956_960delAAGAG
1	ADA	Exon4	frameshift deletion	c.318delG
1	ADA	Exon4	frameshift deletion	c.317delT
1	ADAP1	Exon10	stopgain SNV	c.918C>A
1	ADAP2	Exon2	splicing	c.225+1G>A
1	ADARB1	Exon6	frameshift deletion	c.1079_1080delGG
1	ADAT2	Exon4	frameshift deletion	c.409_410delGT
1	ADCK2	Exon1	splicing	c.933+1G>C
1	ADCY10	Exon17	frameshift deletion	c.2206delT
1	ADCY2	Exon17	frameshift deletion	c.2202delA
1	ADCY5	Exon8	frameshift insertion	c.1956_1957insGC
1	ADCY7	Exon20	frameshift insertion	c.2533_2534insAG
1	ADCY7	Exon25	frameshift insertion	c.3113_3114insT
1	ADD3	Exon14	stopgain SNV	c.1987delC
1	ADD3	Exon14	frameshift insertion	c.2006dupA
1	ADH1A	Exon5	splicing	c.347+1G>C
1	ADH5	Exon5	frameshift deletion	c.503_504delAA
4	ADI1	Exon4	stopgain SNV	c.508C>T

1	ADNP2	Exon4	frameshift insertion	c.2904dupG
1	ADPRHL1	Exon6	frameshift insertion	c.863_864insC
1	ADPRH	Exon5	stopgain SNV	c.798G>A
1	ADRB3	Exon3	splicing	c.1206-2A>C
1	ADRBK1	Exon13	frameshift deletion	c.1074delT
1	ADRBK2	Exon6	stopgain SNV	c.454G>T
1	ADSSL1	Exon9	frameshift deletion	c.914delT
1	AFAP1L1	Exon9	stopgain SNV	c.934C>T
1	AFAP1L2	Exon15	frameshift insertion	c.1954dupG
1	AFAP1L2	Exon15	frameshift deletion	c.1886delC
1	AFMID	Exon6	splicing	c.395-2A>G
1	AFM	Exon1	frameshift insertion	c.47dupT
2	AGAP2	Exon2	stopgain SNV	c.185G>A
3	AGAP5	Exon8	stopgain SNV	c.1957C>T
7	AGAP6	Exon1	frameshift insertion	c.55dupC
10	AGAP6	Exon1	frameshift deletion	c.208delC
3	AGAP6	Exon8	stopgain SNV	c.1861G>T
1	AGBL1	Exon22	stopgain SNV	c.3082C>T
1	AGBL1	Exon23	splicing	c.3185+1G>T
4	AGBL1	Exon23	splicing	c.3185+2dupT
1	AGBL2	Exon18	frameshift insertion	c.2474dupA
1	AGER	Exon2	stopgain SNV	c.153G>A
1	AGL	Exon28	splicing	c.3836+1G>A
1	AGMAT	Exon8	splicing	c.986-2A>T
2	AGMO	Exon1	frameshift insertion	c.60_61dupTT
1	AGPAT3	Exon6	frameshift deletion	c.649delT
6	AGPAT4	Exon4	stopgain SNV	c.439A>T
1	AGPAT6	Exon4	frameshift insertion	c.418_419insAT
1	AGPAT6	Exon12	frameshift deletion	c.1244delG
1	AGPAT6	Exon12	frameshift deletion	c.1248delT
4	AGPAT6	Exon13	stoploss SNV	c.1370G>C
1	AGPAT9	Exon3	stopgain SNV	c.259C>T
4	AGPHD1	Exon3	stopgain	c.435T>A

			SNV	
1	AGR2	Exon2	stopgain SNV	c.51C>G
1	AGR3	Exon6	splicing	c.303+2T>C
1	AGRP	Exon3	frameshift insertion	c.131dupG
1	AGTPBP1	Exon14	frameshift deletion	c.1862delA
1	AGTPBP1	Exon14	frameshift deletion	c.1853delC
1	AGTR2	Exon3	frameshift deletion	c.402delT
1	AGXT2	Exon5	splicing	c.363-1G>T
1	AGXT2	Exon3	splicing	c.177+2T>C
1	AHCTF1	Exon27	splicing	c.3374+1G>T
5	AHCTF1	Exon15	splicing	c.1742-1G>A
1	AHDC1	Exon6	frameshift insertion	c.1785_1786insG
1	AHI1	Exon8	stopgain SNV	c.1267C>T
4	AHI1	Exon8	stopgain SNV	c.1244C>G
1	AHNAK2	Exon7	frameshift insertion	c.16956_16957insA
2	AHNAK2	Exon7	frameshift insertion	c.16843_16844insT
1	AHNAK2	Exon7	stopgain SNV	c.9316C>T
1	AHNAK2	Exon7	frameshift deletion	c.7840delA
3	AHNAK2	Exon7	frameshift insertion	c.3335_3336insA
3	AHNAK2	Exon7	frameshift deletion	c.3330delG
1	AHR	Exon10	frameshift deletion	c.1165delG
1	AHSA1	Exon9	stoploss SNV	c.1015T>A
1	AHSA2	Exon6	stopgain SNV	c.295G>T
1	AHSA2	Exon6	frameshift insertion	c.320_323dupCTAT
1	AHSG	Exon1	stopgain SNV	c.4A>T
1	AHSP	gene	frameshift deletion	wholegene
1	AIFM3	Exon9	frameshift deletion	c.807_807del
1	AIM1	Exon2	frameshift insertion	c.2008dupA
1	AIM1	Exon9	frameshift deletion	c.3759_3760delTG
2	AIM2	Exon6	stoploss SNV	c.1030T>G
11	AIM2	Exon6	frameshift deletion	c.1027delA
1	AIM2	Exon6	frameshift insertion	c.1027dupA
1	AIMP1	Exon7	frameshift	c.828delT

			deletion	
1	AIPL1	Exon3	splicing	c.97-2A>G
1	AIP	Exon2	frameshift deletion	c.209delT
1	AIP	Exon2	frameshift deletion	c.213delT
3	AK7	Exon3	stopgain SNV	c.336T>A
1	AK8	Exon8	frameshift deletion	c.605delA
1	AKAP10	Exon4	frameshift deletion	c.775delC
2	AKAP13	Exon34	stopgain SNV	c.7618C>T
4	AKAP3	Exon4	frameshift insertion	c.2102dupG
4	AKAP3	Exon4	frameshift deletion	c.2098delT
1	AKAP7	Exon4	splicing	c.428+1G>A
3	AKAP8	Exon11	splicing	c.1302+2T>G
1	AKD1	Exon23	stopgain SNV	c.2570T>G
1	AKD1	Exon10	stopgain SNV	c.847C>T
1	AKIRIN2	Exon2	frameshift deletion	c.260_261delAA
1	AKNAD1	Exon14	splicing	c.2167+1G>A
1	AKNAD1	Exon9	splicing	c.1664+1G>A
1	AKNA	Exon18	frameshift insertion	c.3630_3631insAA
1	AKNA	Exon9	splicing	c.1916+1G>A
1	AKR1B10	Exon1	frameshift deletion	c.37delA
1	AKR1C3	Exon9	stopgain SNV	c.969T>G
1	AKR7A2	Exon7	stopgain SNV	c.1033C>T
7	AKT1	Exon4	stopgain SNV	c.235C>T
1	AKT3	Exon9	splicing	c.819+2_819+2delT
8	ALAS1	Exon6	frameshift deletion	c.840delT
1	ALDH18A1	Exon14	stopgain SNV	c.1648A>T
1	ALDH18A1	Exon4	frameshift insertion	c.438_439dupCC
1	ALDH1B1	Exon2	frameshift insertion	c.479_480insGA
1	ALDH1B1	Exon2	frameshift insertion	c.482dupT
2	ALDH1B1	Exon2	frameshift deletion	c.578delG
1	ALDH1B1	Exon2	stopgain SNV	c.1132C>T
4	ALDH1B1	Exon2	frameshift deletion	c.1161delC
1	ALDH1L1	Exon15	splicing	c.1694+1G>T
1	ALDH1L2	Exon3	stopgain	c.381T>A

			SNV	
1	ALDH1L2	Exon2	stopgain SNV	c.139C>T
1	ALDH2	Exon7	frameshift deletion	c.670delC
1	ALDH2	Exon7	frameshift deletion	c.671delA
1	ALDH2	Exon7	frameshift insertion	c.723dupG
1	ALDH3A2	Exon3	stopgain SNV	c.462T>G
1	ALDH4A1	Exon7	frameshift deletion	c.614delC
1	ALDH4A1	Exon7	frameshift deletion	c.609_610delCG
1	ALDH5A1	Exon3	frameshift insertion	c.454_455insTA
1	ALDH5A1	Exon6	splicing	c.766-1G>T
1	ALDH6A1	Exon8	frameshift insertion	c.1003dupG
1	ALDH9A1	Exon5	stopgain SNV	c.732T>A
2	ALDOB	Exon3	stopgain SNV	c.178C>T
1	ALDOC	Exon3	frameshift deletion	c.236delT
1	ALG10B	Exon2	stopgain SNV	c.355C>T
1	ALG10	Exon2	frameshift deletion	c._del
1	ALG1L2	Exon3	stopgain SNV	c.248G>A
1	ALG1	Exon11	stopgain SNV	c.1095T>A
1	ALG8	Exon9	stopgain SNV	c.902T>A
1	ALG9	Exon8	frameshift deletion	c.876delC
1	ALKBH3	Exon2	frameshift insertion	c.13dupA
1	ALKBH3	Exon4	stopgain SNV	c.208C>T
1	ALKBH3	Exon6	frameshift deletion	c.368_369delAG
1	ALK	Exon29	stopgain SNV	c.4849C>T
1	ALLC	Exon5	stopgain SNV	c.265C>T
1	ALOX12	Exon11	stopgain SNV	c.1450C>T
1	ALOX15B	Exon2	frameshift deletion	c.279delG
2	ALOX15B	Exon10	stopgain SNV	c.1387C>T
1	ALOXE3	Exon7	stopgain SNV	c.1096C>T
1	ALPK1	Exon3	stopgain SNV	c.46C>T
2	ALPK2	Exon6	frameshift deletion	c.5373delG

2	ALPK2	Exon5	frameshift deletion	c.3017delA
2	ALPK2	Exon5	stopgain SNV	c.2737A>T
4	ALPK2	Exon5	frameshift insertion	c.2045dupC
1	ALPK2	Exon4	frameshift insertion	c.506_509dupACCA
1	ALPP	Exon4	frameshift insertion	c.378_379insGT
1	ALPP	Exon7	stopgain SNV	c.804T>G
1	ALS2CL	Exon26	frameshift deletion	c._del
1	ALS2CR11	Exon10	stopgain SNV	c.997G>T
1	ALS2CR11	Exon1	frameshift insertion	c.51dupC
1	ALS2CR12	Exon15	stopgain SNV	c.1265C>G
4	ALS2CR8	Exon16	frameshift insertion	c.2146dupA
2	ALS2	Exon16	splicing	c.2841+1G>C
1	AMBN	Exon7	splicing	c.532-1G>A
1	AMHR2	Exon3	frameshift deletion	c.403_404delCC
1	AMHR2	Exon3	frameshift deletion	c.407delG
1	AMHR2	Exon3	frameshift deletion	c.414_418delGGCTG
1	AMICA1	Exon10	splicing	c.1006-1G>C
1	AMOTL1	Exon10	splicing	c.2261+2T>C
1	AMPD2	Exon1	splicing	c.10+2_10+8delTGAGTGT
1	AMY2B	Exon7	splicing	c.745-2A>T
1	AMZ1	Exon7	stopgain SNV	c.1441C>T
2	AMZ2	Exon7	frameshift deletion	c.937_941delAGGTG
1	ANAPC4	Exon27	stopgain SNV	c.1924C>T
3	ANGEL2	Exon2	frameshift deletion	c.197_206delACCCATACTT
1	ANGPT2	Exon3	stopgain SNV	c.497C>A
1	ANGPT4	Exon9	frameshift deletion	c.1366delG
1	ANGPTL3	Exon1	frameshift deletion	c.361_365delAACTC
1	ANGPTL3	Exon6	splicing	c.932-2A>G
1	ANGPTL4	Exon6	frameshift insertion	c.1101dupC
1	ANGPTL5	Exon9	stopgain SNV	c.1158T>G
1	ANGPTL6	Exon4	stopgain SNV	c.851C>G
7	ANK1	Exon33	frameshift deletion	c.4106_4107delAG
1	ANK1	Exon15	frameshift insertion	c.1722_1723dupCG

1	ANK3	Exon17	splicing	c.1672-1_1672-1delG
1	ANK3	Exon17	splicing	c.1672-1G>A
1	ANK3	Exon15	stopgain SNV	c.1528C>T
1	ANKFN1	Exon2	splicing	c.62+2T>C
1	ANKFN1	Exon10	frameshift deletion	c.1155_1156delTG
1	ANKFN1	Exon11	frameshift deletion	c.1290delG
2	ANKHD1	Exon21	stopgain SNV	c.3799G>T
1	ANKLE1	Exon5	frameshift deletion	c.931delA
1	ANKMY2	Exon9	stopgain SNV	c.1036C>T
1	ANKRD16	Exon4	frameshift deletion	c.661delG
1	ANKRD18B	Exon3	stopgain SNV	c.443C>A
1	ANKRD1	Exon4	splicing	c.208-1G>C
5	ANKRD20A4	Exon6	frameshift deletion	c.775_778delCTTA
7	ANKRD20A4	Exon15	frameshift deletion	c.2319_2322delGAAA
1	ANKRD22	Exon6	splicing	c.498+1G>A
1	ANKRD23	Exon4	frameshift deletion	c.334_343delCTGGAGATGT
1	ANKRD24	Exon12	frameshift deletion	c.895delC
1	ANKRD27	Exon27	frameshift deletion	c._del
1	ANKRD30A	Exon1	stopgain SNV	c.46C>T
17	ANKRD30A	Exon3	stopgain SNV	c.328G>T
6	ANKRD30A	Exon25	splicing	c.2344+1G>T
20	ANKRD30A	Exon27	frameshift deletion	c.2443delG
1	ANKRD30A	Exon32	frameshift deletion	c.2869_2872delTTAG
4	ANKRD30A	Exon34	frameshift deletion	c.3771_3772delTG
2	ANKRD35	Exon10	stopgain SNV	c.1510C>T
1	ANKRD35	Exon10	frameshift insertion	c.1804dupG
1	ANKRD35	Exon10	stopgain SNV	c.2770C>T
1	ANKRD35	Exon13	stoploss SNV	c.3004T>A
3	ANKRD36B	Exon41	frameshift deletion	c.3883delA
1	ANKRD36B	Exon39	frameshift deletion	c.3390delA
1	ANKRD36B	Exon26	splicing	c.1710+1_1710+1delG
12	ANKRD36	Exon1	frameshift deletion	c.12delC
1	ANKRD36	Exon40	splicing	c.2479-1G>A

2	ANKRD36	Exon59	splicing	c.3498+1_3498+1delG
1	ANKRD36	Exon69	frameshift insertion	c.4270_4271insA
1	ANKRD36	Exon71	frameshift deletion	c.5154delA
5	ANKRD36	Exon73	frameshift deletion	c.5647delA
12	ANKRD36	Exon75	frameshift insertion	c.5809dupC
1	ANKRD37	Exon2	frameshift insertion	c.83_84insCC
1	ANKRD6	Exon5	splicing	c.319-2A>G
1	ANLN	Exon2	stopgain SNV	c.31C>T
1	ANLN	Exon4	splicing	c.873+2_873+2delT
1	ANO10	Exon2	frameshift insertion	c.132dupA
1	ANO1	Exon18	stopgain SNV	c.1798A>T
3	ANO5	Exon5	frameshift insertion	c.191dupA
1	ANO5	Exon10	stopgain SNV	c.892G>T
9	ANO7	Exon24	frameshift deletion	c.2741_2742delCA
3	ANO8	Exon15	splicing	c.2418+2T>G
1	ANPEP	Exon18	stopgain SNV	c.2449C>T
4	ANTXR2	Exon13	frameshift insertion	c.1073dupC
10	ANTXR2	Exon13	frameshift deletion	c.1069delG
1	ANUBL1	Exon9	frameshift deletion	c.2010_2011delTG
1	ANUBL1	Exon8	splicing	c.1872+1G>T
1	ANUBL1	Exon7	frameshift deletion	c.1064_1065delCT
1	ANXA10	Exon1	splicing	c.18+2T>C
4	ANXA10	Exon2	stopgain SNV	c.70C>T
1	ANXA5	Exon9	stopgain SNV	c.601C>T
1	ANXA7	Exon14	stopgain SNV	c.1435C>T
3	AOAH	Exon19	stopgain SNV	c.1453G>T
1	AOAH	Exon18	frameshift insertion	c.1363dupA
1	AOC2	Exon1	frameshift deletion	c.114delC
4	AOC2	Exon1	stopgain SNV	c.140G>A
1	AOC2	Exon1	frameshift insertion	c.559_560insT
1	AOC2	Exon1	frameshift insertion	c.764dupT
1	AOC2	Exon1	frameshift deletion	c.770delA
1	AOC2	Exon1	frameshift	c.1102_1108delGCCGATT

			deletion	
1	AOC2	Exon1	frameshift deletion	c.1244_1245delCA
1	AOC2	Exon1	frameshift insertion	c.1254_1255insA
1	AOC2	Exon1	frameshift deletion	c.1254delG
1	AOX1	Exon16	stopgain SNV	c.1626T>G
2	AOX1	Exon26	stopgain SNV	c.2896C>T
1	AP1G2	Exon12	splicing	c.1091+1G>A
1	AP1M1	Exon9	frameshift insertion	c.909_910insT
7	AP1M2	Exon10	frameshift deletion	c.1127_1128delTC
1	AP1M2	Exon10	frameshift deletion	c.1111delG
1	AP1M2	Exon3	frameshift deletion	c.200delT
2	AP1M2	Exon4	splicing	c.200-1G>T
1	AP1S1	Exon4	frameshift insertion	c.364dupG
1	AP2A1	Exon12	frameshift insertion	c.1547_1548insT
1	AP2A2	Exon14	frameshift deletion	c.1825delT
1	AP2A2	Exon14	frameshift deletion	c.1944delT
1	AP2B1	Exon2	splicing	c.37+2T>C
2	AP2B1	Exon6	frameshift deletion	c.532_533delGC
4	AP2M1	Exon11	stoploss SNV	c.1294T>C
6	AP3B2	Exon10	frameshift insertion	c.1166dupA
20	AP3M1	Exon6	stopgain SNV	c.772C>T
2	AP3M2	Exon5	frameshift insertion	c.636dupG
1	AP3M2	Exon6	frameshift insertion	c.716dupT
1	AP3S1	Exon2	frameshift deletion	c.121_124delAAGA
1	AP4B1	Exon7	frameshift deletion	c.1160_1161delCA
1	AP4E1	Exon6	frameshift deletion	c.567delT
1	AP4M1	Exon13	stopgain SNV	c.1012C>T
1	APBA1	Exon2	frameshift deletion	c.15_18delGGGG
1	APC	Exon9	stopgain SNV	c.1316C>G
1	APC	Exon14	frameshift deletion	c.3772delT
1	APC	Exon14	frameshift insertion	c.4638dupA
1	APCS	Exon2	frameshift insertion	c.482dupG

1	APEX1	Exon4	frameshift deletion	c.285delA
1	APEX1	Exon4	frameshift deletion	c.301_307delGAGAACA
1	APEX1	Exon5	frameshift insertion	c.648dupA
1	APEX2	Exon6	frameshift insertion	c.661_662insT
4	APIP	Exon3	stopgain SNV	c.199C>T
13	APLF	Exon10	frameshift deletion	c.1528delA
1	APOA2	Exon4	splicing	c.53-15_53-6del TGTGTGTGTG
3	APOA2	Exon4	splicing	c.53-17_53-6del TGTGTGTGTGTG
5	APOA2	Exon4	splicing	c.53-11_53-6del TGTGTG
3	APOBEC1	Exon3	stopgain SNV	c.62G>A
1	APOBEC3A	Exon3	frameshift deletion	c.235delG
1	APOBEC3B	Exon2	splicing	c.174+1G>T
2	APOBEC3B	Exon6	frameshift deletion	c.784delG
1	APOBEC3G	Exon3	stopgain SNV	c.394C>T
1	APOB	Exon26	stopgain SNV	c.7564C>T
4	APOB	Exon26	stopgain SNV	c.6086T>G
1	APOL4	Exon6	stoploss SNV	c.693A>G
20	APOL4	Exon4	splicing	c.35+2T>G
1	APOL5	Exon3	stopgain SNV	c.343C>T
4	APOL5	Exon4	frameshift deletion	c.1250delC
1	APPBP2	Exon1	frameshift deletion	c.39_40delCT
3	APPL1	Exon6	splicing	c.374-1G>A
5	APPL1	Exon15	stopgain SNV	c.1423G>T
1	APPL1	Exon21	frameshift deletion	c.1930_1933delAGAG
1	APTX	Exon6	stopgain SNV	c.781C>T
1	APTX	Exon5	stopgain SNV	c.554delT
7	APTX	Exon7	splicing	c.484-25_484- 5delGTTTTTTTTTTGTTTTTTT
1	AQP10	Exon6	frameshift insertion	c.812_813insT
5	AQP12A	Exon2	frameshift deletion	c.419delG
1	AQP12B	Exon1	stopgain SNV	c.405G>A
2	AQP6	Exon4	frameshift deletion	c.781delG

1	AQP7	Exon6	stopgain SNV	c.506G>A
2	AQP7	Exon4	frameshift deletion	c.191delA
7	AQP7	Exon3	stopgain SNV	c.88_89insGAGGAAGATG
2	AQP9	Exon5	frameshift deletion	c.497delT
7	ARAP1	Exon29	stopgain SNV	c.3932T>A
1	ARF6	Exon2	frameshift deletion	c.218delT
1	ARF6	Exon2	frameshift deletion	c.220delT
1	ARHGAP10	Exon8	splicing	c.703-2A>G
1	ARHGAP10	Exon9	frameshift insertion	c.926dupC
1	ARHGAP10	Exon9	frameshift insertion	c.927dupT
1	ARHGAP10	Exon17	frameshift deletion	c.1512delG
1	ARHGAP15	Exon14	stopgain SNV	c.1415C>G
1	ARHGAP25	Exon6	splicing	c.688-2A>T
1	ARHGAP27	Exon5	frameshift deletion	c.350delA
2	ARHGAP29	Exon5	frameshift deletion	c.491delC
1	ARHGAP33	Exon21	frameshift deletion	c.2195delC
10	ARHGAP36	Exon7	stopgain SNV	c.938C>G
13	ARHGAP40	Exon3	stopgain SNV	c.415C>T
2	ARHGAP44	Exon14	frameshift deletion	c.1158delC
1	ARHGAP5	Exon2	stopgain SNV	c.1438C>T
1	ARHGAP5	Exon2	stopgain SNV	c.1441G>T
8	ARHGAP5	Exon2	frameshift deletion	c.2628delC
1	ARHGAP8	Exon11	frameshift insertion	c.898_899insA
1	ARHGAP9	Exon13	splicing	c.1552+1G>T
1	ARHGDIA	Exon2	frameshift deletion	c.128_129delAG
1	ARHGEF15	Exon6	frameshift deletion	c.1136delC
3	ARHGEF2	Exon6	stopgain SNV	c.515C>G
2	ARHGEF35	Exon2	frameshift insertion	c.1275dupC
4	ARHGEF37	Exon4	splicing	c.458+1G>A
1	ARHGEF40	Exon3	splicing	c.1450+2T>G
2	ARHGEF4	Exon4	splicing	c.427+2T>C
1	ARHGEF4	Exon5	frameshift deletion	c.548_549delAG
1	ARHGEF5	Exon2	stopgain	c.616C>T

			SNV	
10	ARHGEF6	Exon18	frameshift deletion	c.1892delA
9	ARHGEF6	Exon18	frameshift deletion	c.1877_1878delTG
8	ARID1A	Exon14	frameshift deletion	c.3701delG
2	ARID4A	Exon20	splicing	c.3211+1G>A
6	ARL11	Exon2	stopgain SNV	c.446G>A
1	ARL13B	Exon10	stopgain SNV	c.1252C>T
1	ARL6IP1	Exon3	frameshift deletion	c.198_202delTCTGT
1	ARMC3	Exon2	frameshift deletion	c.14delT
4	ARMC3	Exon6	frameshift deletion	c.406_407delAT
7	ARMC3	Exon16	stopgain SNV	c.1982C>A
1	ARMC5	Exon4	frameshift deletion	c.2061delG
2	ARMC6	Exon5	stopgain SNV	c.859G>T
1	ARMCX2	Exon6	frameshift deletion	c.1436delC
1	ARMCX2	Exon6	frameshift deletion	c.1297delA
1	ARMCX6	Exon4	frameshift deletion	c.233delC
1	ARMS2	Exon1	frameshift deletion	c.246_247delTC
1	ARNTL2	Exon9	splicing	c.776-1G>A
1	ARSD	Exon9	frameshift insertion	c.1302dupG
1	ARSE	Exon7	stopgain SNV	c.991G>T
1	ARSJ	Exon2	frameshift insertion	c.1611dupC
1	ART1	Exon3	stopgain SNV	c.225T>G
2	ART3	Exon10	stopgain SNV	c.1027A>T
1	ART5	Exon3	frameshift insertion	c.70_71insA
1	ART5	Exon3	frameshift insertion	c.69_70insAC
1	ARV1	Exon4	frameshift deletion	c.518delA
1	ASAH1	Exon13	splicing	c.900-2A>G
1	ASAH1	Exon1	frameshift deletion	c.108_114delCTTTGCT
1	ASAP2	Exon22	frameshift insertion	c.2357dupC
5	ASB11	Exon2	stopgain SNV	c.223C>T
1	ASB12	Exon3	frameshift insertion	c.880_881dupCA
11	ASB15	Exon7	frameshift deletion	c.721delG

2	ASB15	Exon7	frameshift deletion	c.761delG
1	ASB15	Exon7	stopgain SNV	c.844C>T
1	ASB15	Exon10	stopgain SNV	c.1734T>A
1	ASB18	Exon2	frameshift deletion	c.296delA
1	ASB2	Exon10	stopgain SNV	c.1801C>T
1	ASB6	Exon5	stopgain SNV	c.566G>A
1	ASB8	Exon4	frameshift deletion	c.375delA
2	ASCL3	Exon2	frameshift insertion	c.475_476dupAA
3	ASCL3	Exon2	stopgain SNV	c.382C>T
1	ASCL4	Exon1	frameshift deletion	c.515delG
1	ASH1L	Exon3	frameshift insertion	c.2574dupG
1	ASPDH	Exon1	frameshift deletion	c.20_23delGTAG
1	ASPN	Exon3	stopgain SNV	c.313C>T
1	ASTE1	Exon6	frameshift deletion	c.1894delA
3	ASTL	Exon9	frameshift deletion	c.1282delA
2	ASTN1	Exon15	frameshift deletion	c.2421delG
1	ASXL1	Exon8	frameshift insertion	c.868_869insC
1	ATAD5	Exon1	frameshift deletion	c.39delG
2	ATAD5	Exon8	frameshift insertion	c.2775dupC
1	ATF5	Exon4	stopgain SNV	c.619C>T
1	ATF7IP	Exon14	splicing	c.3281-2A>G
7	ATG3	Exon4	frameshift deletion	c.212_213delAA
3	ATG4C	Exon8	frameshift deletion	c.959_960delTG
1	ATG4D	Exon7	stopgain SNV	c.990C>A
1	ATG7	Exon6	frameshift deletion	c.488delA
1	ATG7	Exon18	stopgain SNV	c.1975C>T
1	ATG9A	Exon13	frameshift deletion	c.2204delG
1	ATG9A	Exon7	frameshift deletion	c.540delG
1	ATL1	Exon10	frameshift deletion	c.871delG
1	ATL1	Exon13	stopgain SNV	c.1177C>T
1	ATM	Exon7	splicing	c.901+1G>A

2	ATM	Exon22	stopgain SNV	c.3169A>T
2	ATOH8	Exon2	frameshift deletion	c.922delC
1	ATP10B	Exon16	splicing	c.1813-2A>G
2	ATP10D	Exon8	frameshift deletion	c.1039delT
1	ATP10D	Exon9	frameshift deletion	c.1166_1167delAT
1	ATP10D	Exon23	frameshift deletion	c.4193_4194delTT
1	ATP11A	Exon28	frameshift deletion	c.3225delC
2	ATP11A	Exon28	frameshift insertion	c.3229dupC
1	ATP12A	Exon8	frameshift insertion	c.912dupC
1	ATP12A	Exon13	splicing	c.1724-2A>G
1	ATP13A5	Exon30	frameshift deletion	c.3653delT
1	ATP13A5	Exon15	frameshift deletion	c.1709_1710delTT
6	ATP13A5	Exon2	stopgain SNV	c.171delG
1	ATP1A4	Exon1	frameshift insertion	c.72dupG
1	ATP2B2	Exon4	splicing	c.397+1G>A
1	ATP2B4	Exon2	stopgain SNV	c.144delT
1	ATP2C1	Exon24	stopgain SNV	c.2380C>T
1	ATP2C1	Exon25	frameshift deletion	c.2584_2585delGT
1	ATP2C2	Exon18	splicing	c.1661-2A>T
6	ATP2C2	Exon25	splicing	c.2482-2A>C
2	ATP4A	Exon8	frameshift deletion	c.1223_1224delTC
3	ATP5J	Exon3	frameshift deletion	c.274delA
1	ATP5L2	Exon1	frameshift deletion	c.171_174delCAGT
1	ATP5O	Exon5	frameshift deletion	c.410delG
1	ATP6V0A2	Exon17	stopgain SNV	c.2064C>A
3	ATP6V0D1	Exon2	frameshift insertion	c.203dupC
1	ATP6V1C2	Exon10	splicing	c.825+2_825+3delTG
5	ATP6V1G3	Exon3	stopgain SNV	c.106C>T
1	ATP6V1H	Exon4	frameshift deletion	c.281delT
1	ATP7B	Exon2	frameshift deletion	c.533delT
1	ATP7B	Exon1	frameshift deletion	c.19_20delCA
1	ATP8B2	Exon28	frameshift deletion	c.3632delG
4	ATP8B3	Exon29	stoploss	c.3903A>G

			SNV	
2	ATP8B4	Exon21	frameshift insertion	c.2210dupA
6	ATP9B	Exon5	stopgain SNV	c.640C>T
1	ATP9B	Exon16	frameshift deletion	c.1896delC
1	ATPAF2	Exon8	frameshift deletion	c.794delG
1	ATPAF2	Exon4	frameshift deletion	c.385_386delCG
3	ATPAF2	Exon4	frameshift deletion	c.382delA
1	ATR	Exon47	stopgain SNV	c.7816C>T
1	ATR	Exon25	frameshift deletion	c.4436delA
1	ATRX	Exon11	stopgain SNV	c.3863C>G
6	ATRX	Exon11	frameshift deletion	c.3862delT
1	ATXN2	Exon18	splicing	c.2785-1G>A
1	ATXN3L	Exon1	stopgain SNV	c.76G>T
1	AURKB	Exon3	frameshift insertion	c.49dupG
1	AURKC	Exon6	frameshift insertion	c.606_607insA
1	AVIL	Exon6	stopgain SNV	c.595C>T
1	AVPR1B	Exon1	frameshift deletion	c.888_889delCT
1	AVPR1B	Exon1	stopgain SNV	c.917G>A
2	AWAT1	Exon4	frameshift deletion	c.314delA
1	AZI1	Exon13	frameshift insertion	c.1627_1628insTC
1	AZI1	Exon13	frameshift insertion	c.1625_1626insG
1	AZU1	Exon5	frameshift deletion	c.695delT
1	B3GALNT2	Exon7	frameshift insertion	c.824_825dupTT
3	B3GNT4	Exon2	stopgain SNV	c.34G>T
1	B3GNT4	Exon3	stopgain SNV	c.688G>T
2	B3GNT4	Exon3	frameshift deletion	c.703_713delTGGGACCCAGC
2	B3GNT6	Exon2	frameshift deletion	c.1010delT
1	B3GNTL1	Exon6	splicing	c.408+1G>A
1	B4GALNT3	Exon9	stopgain SNV	c.790C>T
3	B4GALT3	Exon3	frameshift deletion	c.200delG
5	B7H6	Exon5	frameshift deletion	c.1346_1347delTT
1	BACH2	Exon5	frameshift	c.1186_1187insT

			insertion	
1	BAG4	Exon2	stopgain SNV	c.308G>A
1	BAHD1	Exon2	stopgain SNV	c.58C>T
1	BAHD1	Exon2	frameshift deletion	c.183delA
1	BAI2	Exon4	frameshift deletion	c.262delC
5	BAI3	Exon29	stopgain SNV	c.3724G>T
4	BAIAP2L1	Exon5	splicing	c.215-1G>A
1	BAIAP2L1	Exon3	stopgain SNV	c.203C>G
1	BAIAP2L2	Exon13	frameshift insertion	c.1493dupC
1	BARHL1	Exon3	frameshift insertion	c.819_820insAA
1	BARX2	Exon4	frameshift insertion	c.627_628insT
1	BAX	Exon3	frameshift insertion	c.121dupG
1	BAZ1A	Exon13	frameshift insertion	c.1522dupG
5	BAZ1B	Exon10	frameshift deletion	c.2937delA
4	BAZ1B	Exon6	stopgain SNV	c.787C>T
1	BAZ2A	Exon24	frameshift deletion	c.4870_4871delGG
1	BBOX1	Exon3	stopgain SNV	c.103A>T
1	BBS10	Exon2	frameshift deletion	c.2119_2120delGT
1	BBS12	Exon3	frameshift deletion	c.854_855delTT
4	BBS12	Exon3	frameshift deletion	c.1549delG
1	BBS7	Exon7	frameshift deletion	c.712_715delAGAG
1	BBS9	Exon11	splicing	c.1199-1G>A
1	BCAP29	Exon4	frameshift deletion	c.316delA
1	BCAT1	Exon3	stopgain SNV	c.244C>T
1	BCCIP	Exon1	frameshift insertion	c.24dupT
1	BCCIP	Exon5	splicing	c.599+1G>A
1	BCDIN3D	Exon2	frameshift deletion	c.377delC
1	BCHE	Exon2	frameshift insertion	c.435_436insG
2	BCL2L12	Exon4	stopgain SNV	c.556C>T
1	BCL2L14	Exon2	frameshift deletion	c.402_405delTTCT
2	BCL2L2- PABPN1	Exon3	frameshift insertion	c.364_365insC
1	BCL3	Exon6	frameshift deletion	c.831delC

1	BCL6	Exon5	frameshift deletion	c.406_407delAT
1	BCL7C	Exon6	frameshift insertion	c.618dupA
1	BCL9L	Exon7	frameshift insertion	c.3380dupC
1	BCL9	Exon8	frameshift insertion	c.1547dupC
6	BCLAF1	Exon12	frameshift deletion	c._del
1	BCLAF1	Exon11	frameshift deletion	c.2528delG
5	BCLAF1	Exon5	stopgain SNV	c.1207G>T
4	BCLAF1	Exon4	frameshift insertion	c.109_110insCA
4	BCLAF1	Exon4	frameshift deletion	c.108delT
1	BCO2	Exon5	frameshift insertion	c.653_654insG
1	BCORL1	Exon3	frameshift insertion	c.3243_3244insTT
1	BCOR	Exon4	frameshift deletion	c.2414_2415delAC
2	BDKRB1	Exon3	stopgain SNV	c.844C>T
1	BEND2	Exon2	frameshift deletion	c.213delT
1	BEND2	Exon2	frameshift deletion	c.39_40delAA
1	BEND5	Exon4	frameshift deletion	c.850_854delGCTCC
2	BEND7	Exon9	frameshift deletion	c.1404_1405delCT
1	BEST3	Exon4	frameshift deletion	c.285_288delCCAG
1	BEST3	Exon4	frameshift deletion	c.279_282delGTGG
13	BEST3	Exon3	frameshift deletion	c.177delA
2	BFSP1	Exon8	frameshift deletion	c.1621_1622delTA
2	BFSP1	Exon8	frameshift deletion	c.1620_1621delTT
1	BFSP1	Exon3	splicing	c.63+1G>A
1	BFSP2	Exon1	frameshift deletion	c.482delG
1	BGLAP	Exon3	stopgain SNV	c.156C>G
1	BHMT2	Exon4	splicing	c.406+1G>A
1	BICD2	Exon7	frameshift deletion	c.2435_2436delAA
1	BIRC6	Exon10	frameshift deletion	c.2768delT
3	BIRC6	Exon42	stopgain SNV	c.7988T>A
1	BLM	Exon3	frameshift deletion	c.772_773delCT
1	BLM	Exon8	frameshift deletion	c.1980delT

1	BLVRA	Exon5	stopgain SNV	c.332G>A
1	BLZF1	Exon3	stopgain SNV	c.424C>T
1	BLZF1	Exon7	stopgain SNV	c.1123C>T
6	BMP2K	Exon16	stopgain SNV	c.3481C>T
1	BMP7	Exon2	frameshift deletion	c.607_608delGG
1	BMP8A	Exon7	splicing	c.1060-2A>T
2	BMPR2	Exon12	frameshift deletion	c.2420_2421delAA
1	BMX	Exon2	frameshift deletion	c.93delT
1	BORA	Exon11	frameshift deletion	c.1575_1576delAT
1	BPGM	Exon4	stoploss SNV	c.778delT
3	BPHL	Exon3	splicing	c.378+2T>C
1	BPIFA1	Exon5	splicing	c.581+1G>C
1	BPIFA2	Exon7	stopgain SNV	c.697C>T
1	BPIFA3	Exon3	stopgain SNV	c.326C>A
1	BPIFA3	Exon4	stopgain SNV	c.495C>A
1	BPIFB3	Exon1	stopgain SNV	c.64C>T
6	BPIFB3	Exon4	splicing	c.387-1G>T
1	BPIFB6	Exon1	stopgain SNV	c.49C>T
1	BPIFB6	Exon8	frameshift deletion	c.796delG
1	BPI	Exon13	frameshift insertion	c.1330dupG
1	BRAP	Exon12	frameshift insertion	c.1574_1575insC
1	BRCA1	Exon24	stopgain SNV	c.5508G>A
1	BRCA1	Exon23	frameshift deletion	c.5398delC
7	BRCA1	Exon21	frameshift insertion	c.5329dupC
1	BRCA1	Exon20	frameshift deletion	c.5240_5243delGAAA
1	BRCA1	Exon18	frameshift deletion	c.5093_5096delCTAA
1	BRCA1	Exon12	frameshift insertion	c.4182_4183dupTC
2	BRCA1	Exon11	frameshift deletion	c.4035delA
1	BRCA1	Exon11	frameshift deletion	c.3756_3759delGTCT
1	BRCA1	Exon11	stopgain SNV	c.3403C>T
2	BRCA1	Exon11	frameshift deletion	c.2475delC
1	BRCA1	Exon11	frameshift deletion	c.2457delC

1	BRCA1	Exon11	stopgain SNV	c.2389G>T
1	BRCA1	Exon11	stopgain SNV	c.2138C>G
1	BRCA1	Exon11	frameshift deletion	c.1961delA
1	BRCA1	Exon11	frameshift deletion	c.1510delC
1	BRCA1	Exon11	stopgain SNV	c.1499_1508dup ATAAATTAAA
1	BRCA1	Exon11	stopgain SNV	c.1115G>A
1	BRCA1	Exon10	splicing	c.594-2A>C
1	BRCA1	Exon8	frameshift deletion	c.514delC
1	BRCA1	Exon5	splicing	c.135-1G>T
8	BRCA1	Exon2	frameshift deletion	c.68_69delAG
1	BRCA2	Exon7	splicing	c.631+2T>G
1	BRCA2	Exon9	frameshift deletion	c.771_775delTCAAA
1	BRCA2	Exon10	stopgain SNV	c.880G>T
1	BRCA2	Exon10	frameshift deletion	c.1029delA
1	BRCA2	Exon10	frameshift insertion	c.1813dupA
1	BRCA2	Exon11	frameshift deletion	c.3847_3848delGT
1	BRCA2	Exon11	frameshift deletion	c.4563_4564delAT
1	BRCA2	Exon11	stopgain SNV	c.4889C>G
1	BRCA2	Exon11	frameshift deletion	c.5116_5119delAATA
1	BRCA2	Exon11	frameshift deletion	c.5130_5133delTGTA
1	BRCA2	Exon11	frameshift deletion	c.5213_5216delCTTA
1	BRCA2	Exon11	frameshift deletion	c.5351_5352delAA
1	BRCA2	Exon11	frameshift deletion	c.5569_5573delGAAAC
8	BRCA2	Exon11	frameshift deletion	c.5946delT
1	BRCA2	Exon11	stopgain SNV	c.6037A>T
1	BRCA2	Exon11	frameshift deletion	c.6405_6409delCTTAA
1	BRCA2	Exon14	stopgain SNV	c.7180A>T
1	BRCA2	Exon15	stopgain SNV	c.7558C>T
1	BRCA2	Exon27	stopgain SNV	c.9976A>T
2	BRD4	Exon2	stopgain SNV	c.250C>T
1	BRD9	Exon15	frameshift deletion	c.1681delC
1	BRDT	Exon12	stopgain	c.1943C>G

			SNV	
1	BRIP1	Exon17	frameshift deletion	c.2489delG
1	BRIP1	Exon15	frameshift insertion	c.2108_2109insCC
1	BRIP1	Exon9	frameshift deletion	c.1236delA
2	BRIX1	Exon10	splicing	c.793-2dupA
1	BRMS1	Exon6	splicing	c.359-2A>G
5	BROX	Exon2	frameshift deletion	c.27delA
2	BROX	Exon8	frameshift deletion	c.583delA
5	BROX	Exon8	frameshift deletion	c.595delG
2	BRP44	Exon3	frameshift deletion	c.126delC
1	BRPF1	Exon3	stopgain SNV	c.1145G>A
4	BRPF1	Exon6	frameshift insertion	c.1917_1918insT
1	BRSK1	Exon8	frameshift deletion	c.712delC
1	BRSK1	Exon8	frameshift insertion	c.792_793insG
1	BRSK1	Exon8	frameshift deletion	c.799_800delGA
1	BRSK1	Exon18	splicing	c.2090-2dupA
1	BRWD3	Exon17	frameshift deletion	c.1761delA
1	BSN	Exon5	frameshift deletion	c.3018delT
1	BSN	Exon6	frameshift deletion	c.9234_9237delCCAG
1	BSPRY	Exon6	stoploss SNV	c.1207T>G
3	BTA1F1	Exon12	stopgain SNV	c.1361T>A
1	BTBD6	Exon5	frameshift insertion	c.547_548insG
1	BTBD6	Exon5	frameshift insertion	c.841dupT
1	BTBD7	Exon3	frameshift deletion	c.192delC
1	BTBD7	Exon3	frameshift insertion	c.184_185insT
4	BTD	Exon4	stopgain SNV	c.1505C>G
1	BTK	Exon17	frameshift deletion	c.1701delA
1	BTK	Exon15	stopgain SNV	c.1396A>T
2	BTN2A1	Exon4	stopgain SNV	c.442A>T
1	BTN2A2	Exon3	splicing	c.95-1G>A
1	BTN3A2	Exon5	stopgain SNV	c.646G>T
6	BTN3A3	Exon5	stopgain SNV	c.513G>A

7	BTNL9	Exon4	frameshift deletion	c.622delC
1	BUD31	Exon4	frameshift insertion	c.169_170insT
1	BYSL	Exon6	stopgain SNV	c.910G>T
1	C10ORF10	Exon2	stopgain SNV	c.184C>T
1	C10ORF113	Exon3	splicing	c.168-1G>A
3	C10ORF11	Exon1	frameshift deletion	c.21delC
1	C10ORF120	Exon3	stopgain SNV	c.628C>T
2	C10ORF128	Exon5	stopgain SNV	c.271C>T
1	C10ORF12	Exon1	frameshift insertion	c.2244_2245insG
1	C10ORF12	Exon1	frameshift deletion	c.3411delC
1	C10ORF131	Exon7	stopgain SNV	c.257C>G
3	C10ORF27	Exon7	frameshift deletion	c.676delG
3	C10ORF27	Exon4	stopgain SNV	c.148G>T
2	C10ORF32	Exon1	splicing	c.141+1G>C
2	C10ORF53	Exon2	stopgain SNV	c.195C>A
1	C10ORF53	Exon2	frameshift insertion	c.201dupT
1	C10ORF62	Exon1	stopgain SNV	c.457C>T
1	C10ORF68	Exon3	stopgain SNV	c.21C>G
10	C10ORF68	Exon9	frameshift deletion	c.675_678delAAAT
1	C10ORF71	Exon3	frameshift deletion	c.1655delC
1	C10ORF71	Exon3	frameshift insertion	c.1923_1924insTA
1	C10ORF90	Exon4	stopgain SNV	c.1414C>T
1	C10ORF91	Exon3	frameshift insertion	c.310_311insT
1	C10ORF91	Exon3	frameshift insertion	c.390_391insG
1	C10ORF91	Exon3	frameshift deletion	c.400_401delGT
1	C10ORF92	Exon22	stopgain SNV	c.2584C>T
2	C11ORF16	Exon6	frameshift deletion	c.1377_1378delAT
11	C11ORF1	Exon4	stopgain SNV	c.443C>A
1	C11ORF40	Exon3	splicing	c.308+1G>C
3	C11ORF40	Exon3	splicing	c.142-1G>A
1	C11ORF54	Exon4	stopgain SNV	c.201C>G
1	C11ORF54	Exon8	frameshift insertion	c.641_642insCAAA

1	C11ORF63	Exon5	frameshift deletion	c.1396_1403delGTTAATAA
2	C11ORF65	Exon9	stopgain SNV	c.876C>A
1	C11ORF65	Exon4	stopgain SNV	c.178G>T
2	C11ORF71	Exon1	stopgain SNV	c.57C>G
1	C11ORF82	Exon6	frameshift deletion	c.2709_2718delGAAACTGAAA
1	C11ORF84	Exon4	splicing	c.733+2T>G
3	C12ORF26	Exon2	frameshift deletion	c.295delT
1	C12ORF35	Exon4	stopgain SNV	c.4739T>G
1	C12ORF39	Exon3	splicing	c.88-2A>C
1	C12ORF48	Exon3	frameshift deletion	c.376_377delAC
1	C12ORF49	Exon5	stopgain SNV	c.585T>G
1	C12ORF4	Exon7	stopgain SNV	c.793G>T
1	C12ORF50	Exon12	stopgain SNV	c.1171C>T
1	C12ORF56	Exon10	stopgain SNV	c.1179C>A
1	C12ORF56	Exon10	frameshift deletion	c.1156delT
1	C12ORF65	Exon2	frameshift insertion	c.96_99dupATCC
1	C12ORF69	Exon2	stopgain SNV	c.172A>T
1	C12ORF74	Exon2	stopgain SNV	c.490C>T
1	C13ORF16	Exon5	frameshift deletion	c.240delA
1	C13ORF16	Exon5	frameshift deletion	c.253delA
1	C14ORF105	Exon3	stopgain SNV	c.331C>T
3	C14ORF118	Exon7	stopgain SNV	c.1084C>T
5	C14ORF133	Exon18	frameshift deletion	c.1332delC
1	C14ORF133	Exon7	stopgain SNV	c.484C>T
1	C14ORF135	Exon8	frameshift deletion	c.1730_1733delACAG
1	C14ORF176	Exon6	frameshift deletion	c.305delT
2	C14ORF182	Exon1	frameshift deletion	c.22delC
1	C14ORF183	Exon2	frameshift deletion	c.206delG
1	C14ORF39	Exon14	splicing	c.1059-1G>T
1	C14ORF93	Exon7	splicing	c.1197+1G>T
1	C15ORF32	Exon1	stopgain SNV	c.88A>T
1	C15ORF33	Exon13	stopgain SNV	c.1122_1125dupTAGT

1	C15ORF33	Exon8	stopgain SNV	c.621G>A
1	C15ORF59	Exon2	frameshift insertion	c.866_867insG
3	C16ORF55	Exon3	frameshift insertion	c.406_407insTG
1	C16ORF62	Exon3	stopgain SNV	c.403A>T
2	C16ORF62	Exon4	stopgain SNV	c.602C>A
1	C16ORF89	Exon2	stopgain SNV	c.241C>T
1	C16ORF93	Exon8	frameshift deletion	c.779_780delAG
2	C17ORF101	Exon5	splicing	c.423+1G>A
3	C17ORF101	Exon4	splicing	c.380+1G>A
3	C17ORF104	Exon8	stopgain SNV	c.2770C>T
2	C17ORF28	Exon5	splicing	c.388-1G>T
1	C17ORF56	Exon5	splicing	c.214-2_214-1insAA
1	C17ORF57	Exon9	frameshift insertion	c.650_651insG
5	C17ORF57	Exon10	stopgain SNV	c.706C>T
12	C17ORF57	Exon11	splicing	c.806-1G>A
7	C17ORF57	Exon12	stopgain SNV	c.1297A>T
1	C17ORF57	Exon18	frameshift insertion	c.1947dupA
5	C17ORF58	Exon2	stoploss SNV	c.226T>C
1	C17ORF63	Exon4	stopgain SNV	c.754C>T
2	C17ORF66	Exon4	stopgain SNV	c.400C>T
1	C17ORF74	Exon3	frameshift deletion	c.427delC
7	C17ORF77	Exon3	stopgain SNV	c.253G>T
2	C17ORF80	Exon4	splicing	c.1621+1G>C
1	C17ORF81	Exon5	stopgain SNV	c.405C>A
1	C17ORF81	Exon7	stopgain SNV	c.682C>T
3	C17ORF85	Exon12	stopgain SNV	c.569T>G
2	C18ORF21	Exon5	stopgain SNV	c.622A>T
1	C18ORF34	Exon17	frameshift insertion	c.1662dupA
2	C18ORF34	Exon10	frameshift deletion	c.874delA
2	C18ORF34	Exon9	splicing	c.457+2T>C
1	C19ORF21	Exon2	stopgain SNV	c.922C>T
1	C19ORF21	Exon3	splicing	c.1911+2T>A
3	C19ORF47	Exon8	frameshift deletion	c.531_532delCC

1	C19ORF48	Exon5	stopgain SNV	c.238G>T
3	C19ORF55	Exon9	frameshift deletion	c.1193delG
1	C19ORF57	Exon8	frameshift insertion	c.1847_1850dupCCCT
2	C19ORF59	Exon3	stopgain SNV	c.236T>A
2	C19ORF59	Exon6	stopgain SNV	c.547C>T
1	C19ORF75	Exon3	frameshift insertion	c.120dupG
1	C19ORF75	Exon4	splicing	c.410+1G>A
1	C1ORF105	Exon7	frameshift deletion	c.510_511delCT
1	C1ORF112	Exon12	frameshift insertion	c.1102dupA
1	C1ORF112	Exon13	stopgain SNV	c.1201C>T
1	C1ORF122	Exon3	frameshift insertion	c.268dupC
9	C1ORF127	Exon12	splicing	c.1290+2C>T
3	C1ORF135	Exon3	frameshift deletion	c.780_789delATCAGTGAAA
1	C1ORF135	Exon3	frameshift deletion	c.703delG
1	C1ORF135	Exon2	frameshift deletion	c.117_118delCC
1	C1ORF135	Exon2	frameshift deletion	c.115delC
5	C1ORF141	Exon7	frameshift deletion	c.1017_1021delAATGA
1	C1ORF158	Exon2	stopgain SNV	c.139C>T
1	C1ORF158	Exon3	splicing	c.403+1G>A
1	C1ORF168	Exon17	frameshift insertion	c.1905_1906dupAA
1	C1ORF168	Exon13	splicing	c.1544-2A>G
6	C1ORF168	Exon10	stopgain SNV	c.1420G>T
2	C1ORF168	Exon7	splicing	c.1098+2T>A
1	C1ORF168	Exon6	splicing	c.954-1G>A
1	C1ORF168	Exon3	frameshift insertion	c.850dupA
1	C1ORF168	Exon2	frameshift deletion	c.728_729delAT
1	C1ORF173	Exon12	frameshift deletion	c.2092delG
5	C1ORF177	Exon7	frameshift insertion	c.770dupA
2	C1ORF177	Exon10	stopgain SNV	c.1203G>A
2	C1ORF187	Exon3	frameshift deletion	c.528delC
6	C1ORF189	Exon4	frameshift deletion	c.299_300delGA
1	C1ORF189	Exon4	stopgain SNV	c.271C>T
1	C1ORF210	Exon3	stopgain	c.180C>A

			SNV	
1	C1ORF216	Exon2	frameshift deletion	c.467delT
1	C1ORF216	Exon2	stopgain SNV	c.256G>T
4	C1ORF227	Exon2	stopgain SNV	c.109C>T
1	C1ORF50	Exon3	stopgain SNV	c.211C>T
1	C1ORF51	Exon1	frameshift deletion	c.285_292delAAGATCAA
1	C1ORF85	Exon6	splicing	c.799-2A>G
1	C1ORF87	Exon6	stopgain SNV	c.760A>T
1	C1ORF88	Exon4	frameshift insertion	c.293dupT
1	C1ORF9	Exon24	stopgain SNV	c.3610C>T
1	C1QB	Exon3	frameshift deletion	c.596delA
1	C1QBP	Exon6	splicing	c.699+1G>A
1	C1QC	Exon3	frameshift insertion	c.357_358insC
1	C1QC	Exon3	frameshift deletion	c.494delT
1	C1QTNF1	Exon4	stopgain SNV	c.721C>T
1	C1QTNF2	Exon2	frameshift insertion	c.316_317insCA
1	C1QTNF2	Exon2	stopgain SNV	c.310C>T
1	C1QTNF3	Exon2	frameshift insertion	c.182dupC
2	C1QTNF5	Exon15	frameshift insertion	c.583dupG
1	C1QTNF9	Exon3	stopgain SNV	c.226C>T
1	C1RL	Exon6	frameshift deletion	c.982delT
1	C1R	Exon2	frameshift deletion	c.152_153delCC
1	C20ORF106	Exon1	stopgain SNV	c.97C>T
1	C20ORF107	Exon2	frameshift insertion	c.311dupA
1	C20ORF118	Exon3	frameshift deletion	c.299delG
2	C20ORF132	Exon21	frameshift deletion	c.2825delT
2	C20ORF132	Exon15	frameshift deletion	c.2076_2077delGA
2	C20ORF132	Exon15	frameshift deletion	c.2076delG
2	C20ORF141	Exon1	frameshift deletion	c.176_179delTGAC
1	C20ORF152	Exon1	stopgain SNV	c.30G>A
1	C20ORF26	Exon6	stopgain SNV	c.544C>T
1	C20ORF26	Exon27	frameshift	c.3522_3526delTCTTC

			deletion	
1	C20ORF4	Exon2	frameshift insertion	c.352dupC
1	C20ORF85	Exon3	frameshift insertion	c.248dupT
1	C20ORF94	Exon8	frameshift deletion	c.921_924delCCAC
1	C20ORF94	Exon8	frameshift deletion	c.1110_1111delTT
1	C20ORF96	Exon7	splicing	c.565+1G>A
1	C21ORF2	Exon6	frameshift deletion	c.620_621delCC
1	C21ORF33	Exon4	frameshift insertion	c.349dupA
1	C21ORF59	Exon6	stopgain SNV	c.735C>G
2	C22ORF15	Exon4	stopgain SNV	c.253G>T
2	C22ORF15	Exon5	stopgain SNV	c.394C>T
1	C22ORF23	Exon4	frameshift deletion	c.360_363delAAAG
1	C22ORF25	Exon3	stopgain SNV	c.120G>A
1	C22ORF29	Exon3	frameshift insertion	c.555dupT
1	C22ORF29	Exon3	stopgain SNV	c.451C>T
1	C22ORF31	Exon2	frameshift deletion	c.288_291delTGGA
1	C22ORF33	Exon4	stopgain SNV	c.376C>T
2	C22ORF33	Exon4	splicing	c.234+2T>C
1	C22ORF42	Exon5	splicing	c.400+1G>A
1	C22ORF42	Exon1	frameshift deletion	c.109delG
4	C22ORF42	Exon1	frameshift insertion	c.102dupG
1	C2CD3	Exon27	frameshift insertion	c.5176_5177insG
1	C2CD3	Exon9	splicing	c.1218-2A>G
1	C2ORF3	Exon3	splicing	c.266-2A>G
1	C2ORF40	Exon3	stopgain SNV	c.241C>T
2	C2ORF40	Exon3	stopgain SNV	c.256C>T
1	C2ORF42	Exon7	frameshift deletion	c.1182delA
1	C2ORF42	Exon3	frameshift deletion	c.681_693del GACTCTGAAATCG
1	C2ORF42	Exon3	frameshift deletion	c.138_139delAT
1	C2ORF44	Exon2	frameshift deletion	c.1031delT
1	C2ORF44	Exon2	frameshift insertion	c.213_214insC
1	C2ORF56	Exon8	stopgain SNV	c.960T>A
3	C2ORF57	Exon1	frameshift	c.428_431delGAGA

			deletion	
5	C2ORF63	Exon10	splicing	c.1018+2T>A
4	C2ORF63	Exon7	stopgain SNV	c.610C>T
1	C2ORF65	Exon11	frameshift deletion	c.1477_1484delCCCCTGCC
4	C2ORF65	Exon5	frameshift insertion	c.676dupT
1	C2ORF67	Exon2	frameshift insertion	c.238_239insAG
1	C2ORF68	Exon3	stopgain SNV	c.316C>T
2	C2ORF76	Exon4	frameshift deletion	c.134_143del
1	C2ORF77	Exon7	stopgain SNV	c.1030G>T
1	C2ORF78	Exon3	frameshift insertion	c.1993dupC
1	C2ORF80	Exon5	stopgain SNV	c.253C>T
1	C2ORF85	Exon2	frameshift deletion	c.1620delC
1	C3ORF20	Exon3	frameshift deletion	c.10delC
18	C3ORF25	Exon5	stopgain SNV	c.843T>G
1	C3ORF32	Exon8	stopgain SNV	c.604C>T
1	C3ORF32	Exon6	frameshift insertion	c.382dupG
1	C3ORF33	Exon6	frameshift deletion	c.664delT
1	C3ORF33	Exon6	stopgain SNV	c.394A>T
1	C3ORF62	Exon3	stopgain SNV	c.786dupT
1	C3ORF64	Exon14	frameshift deletion	c.1097delA
1	C3ORF67	Exon13	stopgain SNV	c.1231C>T
10	C3ORF72	Exon2	frameshift deletion	c.200_209del ATTCGAAGGC
1	C3ORF77	Exon2	frameshift deletion	c.730delC
1	C4BPA	Exon7	splicing	c.889+1G>A
14	C4ORF17	Exon3	frameshift deletion	c.253delT
13	C4ORF17	Exon3	frameshift insertion	c.255_256insG
1	C4ORF17	Exon8	splicing	c.880+2T>A
1	C4ORF21	Exon12	frameshift deletion	c.3562_3565delCAGA
1	C4ORF21	Exon7	splicing	c.2602+1G>A
1	C4ORF27	Exon5	frameshift deletion	c.516delA
1	C4ORF29	Exon11	stopgain SNV	c.1138C>T
1	C4ORF32	Exon2	frameshift deletion	c.248delT

4	C4ORF33	Exon5	stopgain SNV	c.430C>T
2	C4ORF37	Exon10	frameshift insertion	c.1282dupG
1	C4ORF37	Exon4	stopgain SNV	c.484C>T
1	C4ORF39	Exon1	frameshift deletion	c.307delA
1	C4ORF46	Exon1	frameshift deletion	c.2delT
1	C4ORF47	Exon1	frameshift deletion	c.98delA
2	C4ORF47	Exon6	frameshift deletion	c.775delG
1	C4ORF51	Exon1	frameshift insertion	c.165dupA
1	C4ORF6	Exon1	frameshift deletion	c.68delT
1	C4ORF6	Exon1	frameshift insertion	c.70dupC
1	C5	Exon27	frameshift deletion	c.3454delA
3	C5	Exon25	frameshift deletion	c.3215delG
1	C5ORF25	Exon7	stopgain SNV	c.920delT
6	C5ORF25	Exon9	stopgain SNV	c.1298T>A
1	C5ORF28	Exon3	stopgain SNV	c.331C>T
1	C5ORF34	Exon3	stopgain SNV	c.208C>T
3	C5ORF42	Exon43	stopgain SNV	c.8385T>G
1	C5ORF45	Exon7	stopgain SNV	c.808C>T
1	C5ORF45	Exon7	stopgain SNV	c.640G>T
5	C5ORF45	Exon2	stopgain SNV	c.112C>T
1	C5ORF48	Exon3	stoploss SNV	c.403T>G
2	C5ORF49	Exon2	stopgain SNV	c.214C>T
1	C5ORF54	Exon2	frameshift deletion	c.591_594delAAGA
1	C5ORF55	Exon1	frameshift deletion	c.196delC
1	C6	Exon17	splicing	c.2381+2T>C
1	C6	Exon16	splicing	c.2290+1G>T
1	C6	Exon13	frameshift deletion	c.1879delG
1	C6	Exon13	splicing	c.1856+2T>G
1	C6	Exon12	stopgain SNV	c.1786C>T
1	C6	Exon12	stopgain SNV	c.1751C>A
2	C6ORF106	Exon3	splicing	c.313+2T>C
1	C6ORF10	Exon22	frameshift deletion	c._del

1	C6ORF118	Exon2	frameshift deletion	c.384delG
14	C6ORF125	Exon1	frameshift deletion	c.10delA
1	C6ORF130	Exon4	stopgain SNV	c.226C>T
1	C6ORF146	Exon7	frameshift deletion	c.1291delG
1	C6ORF165	Exon2	stopgain SNV	c.43C>T
1	C6ORF165	Exon4	frameshift deletion	c.241_242delAT
1	C6ORF186	Exon3	stopgain SNV	c.483G>A
1	C6ORF186	Exon4	splicing	c.418-1G>A
1	C6ORF191	Exon4	frameshift deletion	c.228_231delTTGT
1	C6ORF1	Exon5	stopgain SNV	c.163G>T
1	C6ORF203	Exon4	frameshift insertion	c.647_648dupCT
1	C6ORF211	Exon5	frameshift deletion	c.727delG
1	C6ORF222	Exon2	frameshift insertion	c.571_572insC
1	C6ORF222	Exon2	frameshift deletion	c.568delG
1	C6ORF26	Exon2	stopgain SNV	c.226C>T
1	C6ORF70	Exon13	splicing	c.1317+1G>A
1	C7	Exon6	frameshift deletion	c.502delG
1	C7	Exon17	splicing	c.2350+1_2350+1delG
2	C7	Exon17	splicing	c.2350+2T>C
2	C7ORF10	Exon15	frameshift deletion	c.1194delG
5	C7ORF29	Exon1	frameshift deletion	c.666delC
1	C7ORF43	Exon11	splicing	c.1589+2T>A
1	C7ORF43	Exon8	frameshift insertion	c.1079dupT
3	C7ORF46	Exon4	frameshift deletion	c.633delG
1	C7ORF49	Exon2	frameshift deletion	c.12delA
1	C7ORF52	Exon3	frameshift deletion	c.408delC
2	C7ORF63	Exon22	stopgain SNV	c.2548C>T
1	C7ORF63	Exon23	frameshift insertion	c.2691dupA
1	C7ORF68	Exon2	frameshift insertion	c.168dupA
1	C7ORF72	Exon1	frameshift deletion	c.168delT
1	C8B	Exon12	stopgain SNV	c.1653G>A
4	C8B	Exon9	stopgain SNV	c.1282C>T

6	C8B	Exon6	stopgain SNV	c.694A>T
4	C8ORF44	Exon2	frameshift deletion	c.82delG
5	C8ORF44	Exon2	stopgain SNV	c.207G>A
2	C8ORF44	Exon2	stopgain SNV	c.208C>T
6	C8ORF44-SGK3	Exon17	splicing	c.1075-2_1075-1delAG
2	C8ORF74	Exon4	frameshift insertion	c.844dupC
2	C8ORF80	Exon19	frameshift insertion	c.2376dupC
1	C8ORF85	Exon2	stopgain SNV	c.340C>T
1	C9	Exon10	frameshift deletion	c.1615delT
1	C9	Exon4	stopgain SNV	c.460C>T
1	C9ORF102	Exon6	frameshift deletion	c.1084_1087delGCCA
1	C9ORF117	Exon9	stoploss SNV	c.1561T>C
1	C9ORF128	Exon2	stopgain SNV	c.109G>T
3	C9ORF129	Exon5	stopgain SNV	c.508C>T
1	C9ORF131	Exon3	frameshift insertion	c.2015dupC
1	C9ORF131	Exon3	frameshift deletion	c.2673delA
1	C9ORF135	Exon5	stopgain SNV	c.468C>G
14	C9ORF152	Exon1	frameshift deletion	c.115delA
1	C9ORF153	Exon3	stopgain SNV	c.119C>A
1	C9ORF21	Exon6	splicing	c.422-2A>G
1	C9ORF25	Exon6	frameshift insertion	c.489dupC
1	C9ORF30- TMEFF1	Exon1	stopgain SNV	c.118C>T
1	C9ORF3	Exon6	frameshift deletion	c.1447delA
1	C9ORF3	Exon11	splicing	c.1744-1G>A
1	C9ORF3	Exon12	frameshift deletion	c.1845delT
1	C9ORF66	Exon1	stopgain SNV	c.57G>A
1	C9ORF71	Exon2	stoploss SNV	c.511T>C
1	C9ORF79	Exon4	frameshift deletion	c.884_894delGCCTGGGGTGC
1	C9ORF7	Exon3	frameshift deletion	c.287_288delCT
1	C9ORF86	Exon7	frameshift deletion	c.669_670delTT
1	C9ORF86	Exon7	frameshift deletion	c.674delA
1	C9ORF86	Exon9	frameshift	c.826_827insGA

			insertion	
1	C9ORF86	Exon9	frameshift deletion	c.830delC
1	C9ORF86	Exon9	frameshift deletion	c.833delG
1	C9ORF91	Exon2	frameshift insertion	c.59dupC
1	C9ORF93	Exon17	frameshift deletion	c.2133delG
4	CA11	Exon5	splicing	c.471+1G>C
1	CA1	Exon8	splicing	c.451-2A>C
1	CA3	Exon1	frameshift insertion	c.17dupG
1	CA5A	Exon5	stopgain SNV	c.580C>T
1	CA5B	Exon4	splicing	c.459+1G>A
1	CA5B	Exon8	frameshift deletion	c.951delC
1	CAB39L	Exon5	frameshift insertion	c.245dupT
1	CABIN1	Exon20	frameshift deletion	c.2795delC
2	CABIN1	Exon23	frameshift deletion	c.3289delC
2	CABYR	Exon5	frameshift deletion	c.664_665delTG
2	CACHD1	Exon21	splicing	c.2736-1G>A
6	CACNA1A	Exon46	stopgain SNV	c.6619C>T
1	CACNA1B	Exon2	splicing	c.285-2_285-2delA
4	CACNA1B	Exon6	stopgain SNV	c.853G>T
1	CACNA1B	Exon46	frameshift deletion	c.6928_6931delGTGC
6	CACNA1D	Exon28	frameshift deletion	c.3435delC
1	CACNA1D	Exon46	stopgain SNV	c.5661C>A
1	CACNA1E	Exon8	stopgain SNV	c.1117C>T
1	CACNA1G	Exon12	splicing	c.2754+1G>C
2	CACNA1G	Exon33	frameshift deletion	c.5859delG
1	CACNA1G	Exon33	frameshift deletion	c.5868_5869delTT
2	CACNA1S	Exon44	frameshift deletion	c.5490_5497delAGAGCTAC
1	CACNA1S	Exon25	frameshift deletion	c.3124delG
1	CACNA1S	Exon3	splicing	c.258+2T>C
1	CACNA2D2	Exon30	frameshift deletion	c.2562delG
1	CACNA2D4	Exon25	stopgain SNV	c.2406C>A
1	CACNA2D4	Exon19	stopgain SNV	c.1882C>T
1	CACNB1	Exon14	frameshift insertion	c.1407_1408insT

1	CACNG6	Exon3	frameshift deletion	c.468_469delAG
6	CADM4	Exon7	splicing	c.755+2T>A
2	CAD	Exon14	splicing	c.2156+2T>A
1	CAD	Exon32	frameshift insertion	c.5105_5106insG
1	CAD	Exon40	frameshift deletion	c.6098delT
2	CADPS	Exon20	stopgain SNV	c.2810T>G
1	CADPS	Exon3	stopgain SNV	c.710G>A
1	CAGE1	Exon4	stopgain SNV	c.469A>T
1	CALCR	Exon14	frameshift deletion	c.1358delA
4	CALHM2	Exon3	frameshift deletion	c.341_342delCT
2	CALM1	Exon2	splicing	c.4-1G>C
12	CALML4	Exon1	stopgain SNV	c.118C>T
2	CALML5	Exon1	frameshift deletion	c.219delG
1	CAMK1	Exon5	frameshift deletion	c.293delT
1	CAMK2A	Exon17	frameshift deletion	c.1207delT
1	CAMK2A	Exon18	splicing	c.1205-1_1205-1delG
1	CAMK2B	Exon3	frameshift deletion	c.199delC
1	CAMKV	Exon7	frameshift deletion	c.609delC
1	CAMLG	Exon4	stoploss SNV	c.889T>C
1	CAMSAP1	Exon17	splicing	c.4506+2C>T
2	CAMTA2	Exon15	frameshift insertion	c.2603dupC
1	CAMTA2	Exon4	stopgain SNV	c.279G>A
2	CANT1	Exon4	frameshift deletion	c.708delT
1	CANX	Exon3	stopgain SNV	c.242C>G
3	CAPG	Exon4	frameshift deletion	c.332delC
1	CAPN11	Exon11	stopgain SNV	c.1196G>A
1	CAPN11	Exon13	splicing	c.1417-1G>A
1	CAPN14	Exon2	stopgain SNV	c.32G>A
3	CAPN2	Exon3	stopgain SNV	c.84G>A
1	CAPN5	Exon2	frameshift insertion	c.55_56insC
2	CAPN6	Exon7	stopgain SNV	c.931A>T
5	CAPN7	Exon12	frameshift deletion	c.1331delT
2	CAPN9	Exon3	splicing	c.284-1G>C

2	CAPN9	Exon4	splicing	c.403-2A>G
1	CAPN9	Exon13	splicing	c.1579+2T>G
1	CAPRIN2	Exon1	frameshift deletion	c.234_237delAGAG
6	CAPS2	Exon13	stopgain SNV	c.1196_1203dupATCAAATA
1	CAPS2	Exon13	stopgain SNV	c.1180C>T
1	CAPS2	Exon11	splicing	c.911+2T>A
1	CAPSL	Exon5	frameshift deletion	c.553delT
11	CAPSL	Exon5	frameshift deletion	c.536delA
1	CARD10	Exon14	stopgain SNV	c.2197C>T
1	CARD14	Exon5	frameshift deletion	c.832delA
3	CARD17	Exon3	splicing	c.8-1G>C
1	CARM1	Exon7	frameshift deletion	c.848_849delGA
3	CARS2	Exon15	frameshift insertion	c.1683dupA
2	CARS2	Exon12	stopgain SNV	c.1207A>T
5	CARTPT	Exon3	stoploss SNV	c.349T>C
1	CASKIN2	Exon11	frameshift deletion	c.1060delG
1	CASKIN2	Exon11	frameshift insertion	c.1052_1053insG
1	CASP10	Exon2	stopgain SNV	c.325C>T
1	CASP14	Exon7	stoploss SNV	c.727T>G
1	CASP4	Exon3	frameshift deletion	c.360_363delAAGA
1	CASP4	Exon2	frameshift deletion	c.231delT
2	CASP5	Exon3	frameshift deletion	c.241delA
4	CASP5	Exon3	frameshift insertion	c.241dupA
19	CASP5	Exon2	frameshift deletion	c.67delA
1	CASP8AP2	Exon8	frameshift deletion	c.3550delG
1	CASP8	Exon8	splicing	c.661-1G>A
7	CASP9	Exon6	stopgain SNV	c.532G>T
1	CASP9	Exon3	frameshift deletion	c.178delG
1	CASR	Exon4	frameshift deletion	c.1103delT
1	CASR	Exon7	frameshift deletion	c.2244delG
1	CATSPER1	Exon10	splicing	c.2065-2A>G
1	CATSPER2	Exon8	splicing	c.842+1G>A
1	CATSPER2	Exon2	stopgain SNV	c.40C>T

1	CATSPERG	Exon10	stopgain SNV	c.1168C>T
1	CATSPERG	Exon12	frameshift insertion	c.1354_1355insC
1	CAV3	Exon2	frameshift insertion	c.197_198dupCT
1	CBFA2T2	Exon11	stopgain SNV	c.1551C>A
1	CBFA2T2	Exon11	stopgain SNV	c.1552_1553insA
7	CBLC	Exon8	frameshift insertion	c.1255dupC
3	CBX3	Exon4	splicing	c.168-1_168-0insA
1	CBX4	Exon5	frameshift insertion	c.690dupC
1	CBX8	Exon5	frameshift insertion	c.956dupG
1	CBX8	Exon3	frameshift deletion	c.114_114del
1	CBY1	Exon5	frameshift insertion	c.378dupA
1	CC2D1B	Exon7	frameshift deletion	c.620_623delTAGC
1	CC2D1B	Exon2	frameshift deletion	c.45_46delCC
1	CC2D2B	Exon9	stopgain SNV	c.958C>T
1	CCBL2	Exon14	frameshift deletion	c.1305delA
2	CCBP2	Exon3	frameshift deletion	c.895_896delAG
1	CCDC102B	Exon6	stopgain SNV	c.890G>A
1	CCDC105	Exon1	frameshift deletion	c.56_57delCC
4	CCDC105	Exon6	frameshift deletion	c.1204delC
1	CCDC108	Exon26	frameshift deletion	c.4211_4212delGC
1	CCDC108	Exon26	frameshift deletion	c.4190delT
1	CCDC108	Exon24	frameshift deletion	c.3893_3894delAC
1	CCDC108	Exon24	frameshift deletion	c.3882delG
1	CCDC108	Exon15	stopgain SNV	c.2543G>A
3	CCDC111	Exon7	frameshift deletion	c.558delT
1	CCDC11	Exon2	stopgain SNV	c.292C>T
7	CCDC121	Exon2	frameshift deletion	c.737_738delGA
1	CCDC122	Exon7	stopgain SNV	c.745C>T
1	CCDC127	Exon3	stopgain SNV	c.367G>T
2	CCDC129	Exon11	frameshift deletion	c.2277delT
4	CCDC132	Exon18	splicing	c.1453-1G>C

1	CCDC135	Exon15	frameshift deletion	c.2175_2176delCA
1	CCDC13	Exon13	frameshift deletion	c.1620delA
1	CCDC144A	Exon13	stopgain SNV	c.3409C>T
1	CCDC144NL	Exon4	splicing	c.416-1G>A
1	CCDC146	Exon15	frameshift insertion	c.2058dupT
1	CCDC147	Exon8	splicing	c.1091-2A>C
1	CCDC148	Exon12	frameshift deletion	c.1458_1459delAG
2	CCDC148	Exon5	splicing	c.252-1G>C
1	CCDC14	Exon7	stopgain SNV	c.952C>T
13	CCDC150	Exon3	frameshift deletion	c.291_292delTG
1	CCDC150	Exon3	stopgain SNV	c.307C>T
2	CCDC150	Exon7	frameshift deletion	c.849delA
1	CCDC153	Exon6	stopgain SNV	c.403G>T
2	CCDC27	Exon12	frameshift deletion	c.1916delT
1	CCDC30	Exon4	stopgain SNV	c.418G>T
1	CCDC37	Exon9	frameshift insertion	c.891_892insG
1	CCDC37	Exon15	frameshift deletion	c.1617_1620delGCGG
1	CCDC38	Exon2	stopgain SNV	c.14T>G
4	CCDC39	Exon19	frameshift insertion	c.2660dupT
1	CCDC40	Exon3	frameshift insertion	c.310dupG
1	CCDC40	Exon13	frameshift insertion	c.2205dupG
1	CCDC51	Exon4	stopgain SNV	c.961C>T
1	CCDC57	Exon12	frameshift deletion	c.1772delA
1	CCDC59	Exon2	frameshift deletion	c.196delA
1	CCDC60	Exon3	frameshift deletion	c.333delC
1	CCDC62	Exon8	stopgain SNV	c.931C>T
1	CCDC63	Exon5	frameshift deletion	c.391delA
1	CCDC65	Exon3	splicing	c.301-2A>C
1	CCDC65	Exon3	splicing	c.301-2A>G
16	CCDC65	Exon3	splicing	c.301-1G>A
1	CCDC65	Exon3	stopgain SNV	c.439G>T
1	CCDC65	Exon5	frameshift insertion	c.649_650insC
1	CCDC65	Exon6	frameshift	c.876_877delTA

			deletion	
1	CCDC65	Exon7	stopgain SNV	c.1101T>G
3	CCDC66	Exon10	stopgain SNV	c.1381C>T
4	CCDC66	Exon14	frameshift insertion	c.2319dupG
1	CCDC66	Exon17	frameshift deletion	c.2649delA
3	CCDC66	Exon18	frameshift insertion	c.2823_2826dupAGAG
1	CCDC67	Exon12	frameshift deletion	c.1510delC
1	CCDC73	Exon16	stopgain SNV	c.1642G>T
2	CCDC77	Exon4	stopgain SNV	c.390T>G
1	CCDC77	Exon6	frameshift deletion	c.491delC
1	CCDC77	Exon6	frameshift deletion	c.496_497delAA
1	CCDC78	Exon5	stopgain SNV	c.472C>T
17	CCDC7	Exon2	frameshift insertion	c.230dupT
1	CCDC7	Exon9	stopgain SNV	c.796C>T
1	CCDC7	Exon15	frameshift insertion	c.1185dupA
1	CCDC81	Exon9	stopgain SNV	c.994C>T
1	CCDC83	Exon12	splicing	c.1174-1G>A
1	CCDC84	Exon9	splicing	c.805+2dupT
1	CCDC85A	Exon2	frameshift deletion	c.734delG
1	CCDC85A	Exon2	frameshift deletion	c.742delC
1	CCDC86	Exon1	frameshift deletion	c.568delC
1	CCDC89	Exon1	frameshift deletion	c.773_774delGC
1	CCDC89	Exon1	stopgain SNV	c.234C>A
1	CCDC8	Exon1	frameshift deletion	c.1252delA
1	CCDC90A	Exon3	frameshift deletion	c.619_620delAT
1	CCDC94	Exon4	splicing	c.271-1G>T
1	CCDC96	Exon1	frameshift insertion	c.1450_1451insTT
1	CCDC97	Exon2	frameshift insertion	c.393dupT
1	CCDC99	Exon11	frameshift deletion	c.1426delG
2	CCDC9	Exon12	stopgain SNV	c.1578G>A
1	CCHCR1	Exon16	frameshift insertion	c.1954_1955insT
4	CCHCR1	Exon15	splicing	c.1610-2dupA

2	CCKBR	Exon5	frameshift insertion	c.1029dupT
8	CCL25	Exon6	stoploss SNV	c.452G>C
5	CCL26	Exon3	stopgain SNV	c.132G>A
1	CCNB1IP1	Exon5	frameshift deletion	c.467delA
1	CCND2	Exon1	frameshift deletion	c.83delA
1	CCNDBP1	Exon8	frameshift insertion	c.746_747dupGA
1	CCNF	Exon8	frameshift deletion	c.756_757delCC
1	CCNI2	Exon5	frameshift deletion	c.895delC
1	CCR1	Exon2	frameshift deletion	c.407delT
1	CCR8	Exon2	frameshift deletion	c.67delA
1	CCR9	Exon3	frameshift deletion	c.65delC
1	CCRN4L	Exon3	stopgain SNV	c.1030delC
3	CCT5	Exon4	stopgain SNV	c.412G>T
2	CCT6B	Exon13	stoploss SNV	c.1457G>T
1	CCT6B	Exon6	splicing	c.480-2A>G
5	CCT8L2	Exon1	stopgain SNV	c.1094G>A
1	CD101	Exon2	stopgain SNV	c.352G>T
1	CD109	Exon26	stopgain SNV	c.3149C>G
1	CD109	Exon27	frameshift deletion	c.3376delA
1	CD109	Exon32	frameshift deletion	c.3949delA
6	CD163L1	Exon8	frameshift deletion	c.2007delT
1	CD164	Exon7	splicing	c.428-1G>C
1	CD177	Exon4	splicing	c.380-1G>C
1	CD177	Exon4	stopgain SNV	c.392T>A
1	CD177	Exon5	frameshift deletion	c.598_599delAC
2	CD177	Exon7	frameshift deletion	c.786_787delCT
1	CD180	Exon3	frameshift deletion	c.796delG
1	CD19	Exon1	frameshift deletion	c.14_21delGCCTCCTC
1	CD1A	Exon2	stopgain SNV	c.93G>A
1	CD1A	Exon4	stopgain SNV	c.745C>T
1	CD1B	Exon3	stopgain SNV	c.561T>A
11	CD200R1L	Exon5	frameshift	c.546delC

			deletion	
2	CD200R1	Exon4	frameshift insertion	c.432_433insA
1	CD207	Exon5	stopgain SNV	c.791G>A
1	CD207	Exon1	stopgain SNV	c.70C>T
1	CD209	Exon4	frameshift deletion	c.387delG
3	CD22	Exon4	splicing	c.413-1G>A
2	CD244	Exon4	stopgain SNV	c.764C>G
1	CD247	Exon6	frameshift deletion	c.355_370del GCGGAGGCCTACAGTG
4	CD27	Exon4	frameshift deletion	c.497delT
1	CD27	Exon4	frameshift deletion	c.514_515delCC
1	CD300LB	Exon2	stopgain SNV	c.262C>T
4	CD300LG	Exon2	frameshift deletion	c.345delT
2	CD300LG	Exon4	frameshift insertion	c.651dupC
1	CD320	Exon2	frameshift deletion	c.301delG
16	CD33	Exon3	frameshift deletion	c.466_469delGGCC
1	CD36	Exon4	stopgain SNV	c.220C>T
1	CD36	Exon5	frameshift insertion	c.378_381dupATCA
4	CD36	Exon7	splicing	c.701+1_701+4dupGTAA
6	CD36	Exon10	stopgain SNV	c.975T>G
3	CD36	Exon11	stopgain SNV	c.1079T>G
1	CD36	Exon13	frameshift deletion	c.1202_1205delTATT
1	CD36	Exon14	frameshift insertion	c.1379_1382dupTGAT
1	CD38	Exon1	frameshift deletion	c.109delG
1	CD3EAP	Exon3	frameshift deletion	c.1246delG
3	CD5L	Exon3	stopgain SNV	c.328G>T
1	CD5L	Exon3	frameshift insertion	c.105_106insA
1	CD5	Exon5	frameshift deletion	c.558delC
1	CD5	Exon5	frameshift insertion	c.564_565insT
1	CD5	Exon6	frameshift insertion	c.988_989insA
1	CD63	Exon3	frameshift insertion	c.110_111insA
1	CD68	Exon5	frameshift insertion	c.923_924insC
1	CD6	Exon10	frameshift	c.1575_1576insGAGA

			insertion	
1	CD72	Exon8	frameshift insertion	c.983_984insGG
1	CD72	Exon8	frameshift insertion	c.982_983insAGCTTTGGTCATGG
4	CD72	Exon7	stopgain SNV	c.851T>G
1	CD72	Exon6	stopgain SNV	c.724A>T
1	CD79A	Exon2	frameshift insertion	c.193_194insAA
1	CD97	Exon11	frameshift deletion	c.1252delG
1	CDAN1	Exon5	frameshift deletion	c.969_970delGG
1	CDAN1	Exon5	frameshift deletion	c.962delT
1	CDAN1	Exon5	frameshift deletion	c.953delT
1	CDC20B	Exon8	frameshift deletion	c.898delT
4	CDC27	Exon13	frameshift insertion	c.1702_1703insCC
1	CDC27	Exon13	frameshift insertion	c.1699_1702dupCCAG
4	CDC27	Exon5	stopgain SNV	c.431T>G
1	CDC27	Exon4	frameshift deletion	c.271delA
3	CDC27	Exon2	frameshift insertion	c.59dupC
1	CDC34	Exon5	stopgain SNV	c.682G>T
1	CDC42BPB	Exon29	frameshift insertion	c.3797_3798dupAG
1	CDC42BPB	Exon28	frameshift insertion	c.3553_3554insAG
1	CDC42BPB	Exon28	frameshift insertion	c.3543_3544insA
1	CDC42BPB	Exon26	frameshift insertion	c.3398_3399insCC
1	CDC42BPB	Exon15	frameshift insertion	c.2149_2150insG
1	CDC42BPG	Exon37	frameshift deletion	c.4628delT
1	CDC42EP1	Exon2	frameshift insertion	c.34_35insG
1	CDCA2	Exon15	frameshift insertion	c.2979dupA
1	CDCA3	Exon5	frameshift deletion	c.607delA
1	CDCA3	Exon3	frameshift insertion	c.138dupG
4	CDCP2	Exon4	frameshift insertion	c.1224_1225insGC
2	CDCP2	Exon4	frameshift deletion	c.1224delC
14	CDCP2	Exon4	frameshift insertion	c.1223_1224dupCC
1	CDCP2	Exon1	frameshift deletion	c.50_51delGC

1	CDH10	Exon11	stopgain SNV	c.1657G>T
11	CDH24	Exon2	stopgain SNV	c.138G>A
1	CDH26	Exon4	splicing	c.232-2A>C
1	CDH26	Exon13	stopgain SNV	c.1909C>T
1	CDH2	Exon13	frameshift deletion	c.2175delC
1	CDH3	Exon16	frameshift insertion	c.2462dupA
8	CDH5	Exon9	splicing	c.1485+2T>A
1	CDH7	Exon12	frameshift deletion	c.2087delC
1	CDHR3	Exon9	frameshift deletion	c.1154delT
1	CDHR3	Exon10	frameshift insertion	c.1316dupC
1	CDHR4	Exon11	frameshift deletion	c.1456delA
1	CDHR5	Exon11	frameshift deletion	c.1184delT
1	CDK10	Exon11	frameshift deletion	c.581_582delGC
2	CDK11A	Exon16	frameshift insertion	c.1735dupT
1	CDK11A	Exon5	stopgain SNV	c.415C>T
1	CDK12	Exon9	splicing	c.2846+1G>A
1	CDK13	Exon14	stopgain SNV	c.3886G>T
1	CDK15	Exon5	splicing	c.390+2T>C
1	CDK19	Exon3	splicing	c.129-1G>C
3	CDK2AP2	Exon4	frameshift deletion	c.345delG
3	CDK2AP2	Exon4	frameshift deletion	c.343delG
1	CDK2AP2	Exon4	frameshift deletion	c.325_331delGCCCCGGG
1	CDK5RAP1	Exon5	stopgain SNV	c.457C>T
1	CDK5RAP2	Exon31	frameshift deletion	c.4670_4671delTC
9	CDK5RAP2	Exon30	stopgain SNV	c.4584delC
1	CDK5RAP2	Exon30	frameshift deletion	c.4576delG
1	CDK5RAP2	Exon27	stopgain SNV	c.4096G>T
1	CDK5RAP3	Exon8	frameshift deletion	c.726_727delGA
5	CDKL2	Exon11	splicing	c.1323-1G>A
3	CDKL3	Exon11	frameshift insertion	c.1512_1513dupGG
1	CDKN2B	Exon1	frameshift deletion	c.120delC
1	CDKN3	Exon5	frameshift deletion	c.372delA
2	CDON	Exon10	stopgain	c.1925T>G

			SNV	
1	CDR2	Exon3	frameshift deletion	c.204delG
2	CDRT15	Exon2	splicing	c.262+1G>A
2	CDRT15	Exon1	stopgain SNV	c.70C>T
1	CDRT1	Exon6	frameshift deletion	c.1224_1227delCTCT
1	CDRT1	Exon1	frameshift deletion	c.152_158delTATCACA
1	CDRT4	Exon4	frameshift insertion	c.432_433insC
1	CDX2	Exon3	splicing	c.687+2T>G
1	CDX2	Exon2	frameshift deletion	c.680_683delAGAG
1	CEACAM19	Exon2	frameshift deletion	c.386_389delAATG
1	CEACAM1	Exon4	frameshift deletion	c.767delG
1	CEACAM1	Exon3	frameshift insertion	c.553_554insAGGC
1	CEACAM1	Exon2	frameshift deletion	c.207delA
1	CEACAM20	Exon11	frameshift deletion	c.1623delC
1	CEACAM20	Exon5	stopgain SNV	c.908C>G
1	CEACAM4	Exon2	splicing	c.64+1G>C
2	CEACAM7	Exon2	stopgain SNV	c.250A>T
1	CEACAM7	Exon2	splicing	c.64+1G>T
1	CECR1	Exon7	splicing	c.973-2A>G
1	CECR2	Exon13	frameshift deletion	c.1625delC
2	CECR2	Exon16	stopgain SNV	c.3666G>A
2	CECR2	Exon16	stopgain SNV	c.4210C>T
1	CELA1	Exon6	frameshift insertion	c.590dupG
7	CELA1	Exon1	frameshift insertion	c.12_13insCAACACC
2	CELA1	Exon1	frameshift deletion	c.8delT
20	CELA1	Exon1	frameshift insertion	c.6_7insC
2	CELA3B	Exon5	frameshift deletion	c.439delG
1	CELF3	Exon11	frameshift insertion	c.1133dupA
1	CELSR3	Exon21	frameshift deletion	c.7229delT
1	CELSR3	Exon21	frameshift deletion	c.7224delC
1	CELSR3	Exon1	frameshift deletion	c.3058delC
3	CENPBD1	Exon1	stopgain SNV	c.102dupT
4	CENPE	Exon33	frameshift	c.4898delT

			deletion	
1	CENPE	Exon16	splicing	c.1391-2A>G
1	CENPJ	Exon7	stopgain SNV	c.1586C>G
1	CEP128	Exon3	frameshift deletion	c.221delG
1	CEP135	Exon21	frameshift insertion	c.2743_2744dupGA
1	CEP152	Exon26	frameshift deletion	c.4210_4211delGT
2	CEP164	Exon5	frameshift deletion	c.347delA
1	CEP192	Exon19	splicing	c.3190-1G>C
1	CEP192	Exon30	splicing	c.5616+1G>C
3	CEP250	Exon17	frameshift deletion	c.1943delC
1	CEP250	Exon27	frameshift insertion	c.3681dupT
1	CEP290	Exon49	splicing	c.6645+1G>A
1	CEP290	Exon42	stopgain SNV	c.5824C>T
1	CEP290	Exon39	frameshift deletion	c.5267delC
1	CEP290	Exon39	stopgain SNV	c.5263delA
13	CEP290	Exon27	splicing	c.2818-1G>T
1	CEP44	Exon7	frameshift deletion	c.589delG
1	CEP55	Exon3	stopgain SNV	c.256C>T
1	CEP57L1	Exon10	frameshift deletion	c.810delT
1	CEP68	Exon3	stopgain SNV	c.925delC
1	CEP68	Exon3	frameshift deletion	c.942delG
1	CEP70	Exon16	stopgain SNV	c.1648C>T
1	CEP78	Exon15	splicing	c.1801-1G>C
4	CEP85	Exon14	stopgain SNV	c.2243C>G
1	CEP89	Exon19	stopgain SNV	c.2200G>T
1	CEP89	Exon15	stopgain SNV	c.1714C>T
1	CEP95	Exon10	frameshift insertion	c.1095dupA
1	CER1	Exon1	stopgain SNV	c.19C>T
1	CERCAM	Exon12	frameshift insertion	c.1632_1633insATCT
1	CERKL	Exon5	stopgain SNV	c.715C>T
1	CERS5	Exon6	splicing	c.543+2T>C
3	CES1	Exon8	splicing	c.903+1G>T
1	CES2	Exon2	frameshift deletion	c.382delG
2	CES3	Exon8	stopgain	c.1050G>A

			SNV	
1	CES3	Exon10	stopgain SNV	c.1288C>T
7	CES5A	Exon5	stopgain SNV	c.607C>T
2	CES5A	Exon5	frameshift deletion	c.568_571delGCCC
3	CETN3	Exon2	frameshift deletion	c.43_44delAA
1	CFDP1	Exon5	splicing	c.403-1G>C
1	CFHR1	Exon1	stopgain SNV	c.19delG
1	CFHR1	Exon5	splicing	c.790+1G>A
1	CFHR2	Exon1	stopgain SNV	c.19delG
5	CFHR2	Exon4	stopgain SNV	c.595G>T
1	CFHR3	Exon4	splicing	c.613+2T>C
1	CFHR3	Exon6	frameshift deletion	c.839_840delTA
1	CFHR4	Exon3	splicing	c.439+2T>C
3	CFHR5	Exon4	frameshift insertion	c.485_486dupAA
3	CFHR5	Exon4	frameshift insertion	c.486dupA
1	CFHR5	Exon8	frameshift deletion	c.1225delG
1	CFHR5	Exon10	stopgain SNV	c.1704T>A
1	CFTR	Exon23	stopgain SNV	c.3846G>A
1	CGB5	Exon3	stopgain SNV	c.473C>A
1	CGN	Exon14	stopgain SNV	c.2704G>T
1	CHAC2	Exon1	frameshift deletion	c.116delA
1	CHAF1A	Exon13	frameshift insertion	c.2212dupC
1	CHAF1B	Exon13	splicing	c.1494-2_1494-2delA
1	CHCHD4	Exon3	frameshift deletion	c.351_352delGA
1	CHCHD4	Exon2	stopgain SNV	c.31C>T
1	CHCHD6	Exon4	frameshift deletion	c.344delA
1	CHD1L	Exon8	stopgain SNV	c.781C>T
2	CHD1L	Exon14	splicing	c.1386-2A>G
1	CHD2	Exon22	frameshift deletion	c._del
1	CHD2	Exon22	frameshift insertion	c.2741_2742insA
1	CHD3	Exon38	frameshift deletion	c.5769delT
1	CHD3	Exon38	stopgain SNV	c.5770delC
1	CHD5	Exon9	frameshift insertion	c.1284_1285insA

4	CHD6	Exon18	stopgain SNV	c.2739C>A
1	CHD9	Exon31	frameshift deletion	c.6531delA
1	CHD9	Exon31	frameshift insertion	c.6538_6539insA
2	CHEK2	Exon11	frameshift deletion	c.1100delC
1	CHERP	Exon17	frameshift deletion	c.2740delG
1	CHERP	Exon17	frameshift deletion	c.2729delA
1	CHI3L1	Exon8	stopgain SNV	c.865A>T
1	CHI3L1	Exon7	stopgain SNV	c.670C>T
1	CHI3L2	Exon2	frameshift deletion	c.240delC
1	CHIC2	Exon1	stopgain SNV	c.24T>G
2	CHIT1	Exon10	frameshift deletion	c._del
1	CHIT1	Exon10	stopgain SNV	c.1125C>A
1	CHIT1	Exon5	splicing	c.314+1G>T
1	CHL1	Exon15	frameshift deletion	c.1683_1684delAA
1	CHP2	Exon4	frameshift deletion	c.275delC
1	CHP2	Exon5	frameshift deletion	c.387delG
3	CHP2	Exon7	stopgain SNV	c.562C>T
1	CHPF2	Exon4	frameshift deletion	c.1330_1331delTA
1	CHPF	Exon4	stopgain SNV	c.1111C>T
1	CHRFAM7A	Exon9	frameshift insertion	c.948_949insA
1	CHRFAM7A	Exon9	frameshift insertion	c.947_948insA
1	CHRM1	Exon2	frameshift deletion	c.1148delT
1	CHRNA1	Exon6	frameshift deletion	c.524delT
1	CHRNA1	Exon5	splicing	c.309+1G>T
1	CHRNA2	Exon6	frameshift deletion	c.1293delC
1	CHRNA4	Exon4	frameshift insertion	c.307_308insATAG
1	CHRNA6	Exon4	frameshift deletion	c.433delA
1	CHRNA7	Exon10	frameshift insertion	c.1389_1390insG
1	CHRNA7	Exon10	frameshift insertion	c.1577_1578insA
1	CHRNA7	Exon10	frameshift insertion	c.1578_1579insA
1	CHRNB3	Exon1	splicing	c.52+1G>A
1	CHRNB3	Exon5	frameshift	c.515delG

			deletion	
1	CHRNA	Exon5	splicing	c.351-2A>G
1	CHST15	Exon2	frameshift deletion	c.9delC
1	CHST5	Exon3	frameshift deletion	c.361_364delATCT
1	CHTOP	Exon6	frameshift deletion	c.581delG
1	CIAO1	Exon5	splicing	c.691+2dupT
1	CIAO1	Exon7	frameshift deletion	c.792_793delAG
1	CIB4	Exon1	stopgain SNV	c.21T>A
1	CIDEA	Exon5	frameshift insertion	c.590_591insC
1	CIDEB	Exon7	splicing	c.337-2A>G
1	CIDEB	Exon6	splicing	c.336+1G>A
1	CKAP5	Exon3	frameshift deletion	c.171delC
1	CKB	Exon8	frameshift deletion	c.1068delA
1	CKB	Exon8	frameshift deletion	c.1065_1066delCG
1	CKB	Exon8	frameshift deletion	c.1054_1055delAT
1	CKM	Exon8	stoploss SNV	c.1144T>C
1	CLASP1	Exon34	frameshift insertion	c.3692dupG
2	CLASP1	Exon32	stopgain SNV	c.3380T>G
1	CLCA2	Exon1	stopgain SNV	c.148C>T
2	CLCA2	Exon1	frameshift deletion	c.162delT
1	CLCA2	Exon7	frameshift deletion	c.993delA
2	CLCA4	Exon6	frameshift insertion	c.760dupA
1	CLCN1	Exon12	splicing	c.1401+1G>T
1	CLCN2	Exon15	frameshift deletion	c.1607_1608delAT
1	CLCN3	Exon8	frameshift deletion	c.990delT
3	CLCN3	Exon12	frameshift deletion	c.2247delG
1	CLCN6	Exon15	frameshift deletion	c.1439_1440delAC
1	CLCNKA	Exon2	frameshift deletion	c.85delC
2	CLCNKA	Exon2	frameshift insertion	c.85_86insGA
1	CLDN24	Exon1	stopgain SNV	c.607C>T
1	CLDN5	Exon1	stopgain SNV	c.109C>T
3	CLEC12B	Exon2	frameshift insertion	c.176dupC
2	CLEC16A	Exon18	stopgain	c.2063T>A

			SNV	
1	CLEC18B	Exon5	frameshift deletion	c.603_604delTG
1	CLEC1A	Exon5	frameshift insertion	c.655dupT
1	CLEC2D	Exon5	frameshift deletion	c.529delT
1	CLEC3A	Exon1	frameshift deletion	c.4_5delGG
1	CLEC4F	Exon4	stopgain SNV	c.586C>T
1	CLEC4F	Exon2	frameshift deletion	c.74_75delTG
1	CLEC6A	Exon4	stopgain SNV	c.249G>A
1	CLIC2	Exon5	frameshift deletion	c.451_454delAACA
8	CLLU1	Exon1	frameshift insertion	c.122dupA
2	CLNS1A	Exon1	stopgain SNV	c.114C>G
1	CLP1	Exon3	frameshift insertion	c.577_578insA
1	CLP1	Exon3	frameshift insertion	c.583_584insT
1	CLPTM1	Exon8	stopgain SNV	c.970A>T
1	CLRN1	Exon1	frameshift insertion	c.148_149insTGTC
1	CLSTN2	Exon7	stopgain SNV	c.1151G>A
1	CLSTN3	Exon7	frameshift deletion	c.1066delC
1	CLTB	Exon5	splicing	c.353-2A>T
1	CLTCL1	Exon29	frameshift insertion	c.4576dupC
1	CLTCL1	Exon29	frameshift deletion	c.4550_4559del ATGACCTGCT
1	CLTC	Exon11	stopgain SNV	c.1648delG
7	CLUAP1	Exon7	frameshift deletion	c.708delT
1	CLVS1	Exon3	frameshift deletion	c.588delA
1	CMA1	Exon5	frameshift deletion	c.740delA
2	CMA1	Exon2	stopgain SNV	c.143C>G
13	CMAS	Exon8	frameshift deletion	c.1223_1224delAA
1	CMIP	Exon18	frameshift deletion	c.2035delG
2	CMPK2	Exon2	frameshift deletion	c.714_715delCC
1	CMTM2	Exon1	splicing	c.285+2_285+2delT
2	CMYA5	Exon2	stopgain SNV	c.925A>T
1	CMYA5	Exon2	stopgain SNV	c.3679G>T
1	CMYA5	Exon2	frameshift	c.9614_9617delAAAA

			deletion	
1	CMYA5	Exon2	frameshift deletion	c.10496delA
1	CNDP1	Exon2	frameshift insertion	c.40_44dupGCTGT
1	CNDP2	Exon9	frameshift deletion	c.969delC
1	CNGA1	Exon9	stopgain SNV	c.540delG
1	CNGA3	Exon2	splicing	c.101+1G>A
1	CNGA3	Exon7	frameshift deletion	c.669_670delGG
1	CNGB3	Exon17	frameshift deletion	c.2073delA
4	CNGB3	Exon10	frameshift deletion	c.1148delC
1	CNKSR1	Exon5	splicing	c.519+1G>A
1	CNKSR1	Exon7	frameshift deletion	c.642delC
1	CNKSR1	Exon17	stopgain SNV	c.1492C>T
1	CNKSR1	Exon17	frameshift deletion	c.1514delC
1	CNKSR2	Exon4	splicing	c.519+1G>A
6	CNKSR3	Exon12	frameshift deletion	c.1346delG
1	CNNM2	Exon1	frameshift insertion	c.1620_1621insCT
1	CNNM2	Exon1	frameshift insertion	c.1621_1622insCT
1	CNNM3	Exon6	stopgain SNV	c.1816C>T
8	CNOT3	Exon9	frameshift deletion	c.729delT
1	CNPY2	Exon4	frameshift deletion	c.301delC
1	CNTD2	Exon3	frameshift deletion	c.442delC
2	CNTF	Exon2	stopgain SNV	c.191G>A
1	CNTF	Exon2	frameshift insertion	c.565_566insCC
1	CNTLN	Exon7	stopgain SNV	c.1087C>T
5	CNTN1	Exon9	frameshift deletion	c.845delT
15	CNTN2	Exon10	stopgain SNV	c.1237C>T
1	CNTN3	Exon12	frameshift deletion	c.1580delC
1	CNTN6	Exon8	stopgain SNV	c.814A>T
1	CNTN6	Exon13	frameshift deletion	c.1581_1582delCC
1	CNTNAP1	Exon3	frameshift deletion	c.180delG
9	CNTNAP1	Exon17	splicing	c.2531-2A>T
2	CNTNAP3B	Exon14	frameshift deletion	c.2128_2129delAC

14	CNTNAP3	Exon10	frameshift deletion	c.1599delG
1	CNTNAP3	Exon2	splicing	c.85+1G>A
10	CNTNAP4	Exon5	stoploss SNV	c.630A>G
1	CNTNAP4	Exon12	stoploss SNV	c.1877G>C
1	CNTROB	Exon8	frameshift insertion	c.1058_1059insGT
1	COASY	Exon3	stopgain SNV	c.507T>A
1	COASY	Exon10	stopgain SNV	c.1654C>T
1	COBLL1	Exon14	stopgain SNV	c.3428delC
1	COG2	Exon7	frameshift deletion	c.657delT
1	COG4	Exon1	frameshift deletion	c._del
1	COG7	Exon12	frameshift insertion	c.1498dupT
6	COL11A2	Exon14	stopgain SNV	c.1482C>A
1	COL13A1	Exon27	frameshift insertion	c.1407dupT
1	COL13A1	Exon27	frameshift deletion	c.1431delT
1	COL14A1	Exon7	frameshift deletion	c.689_690delAT
1	COL15A1	Exon12	splicing	c.1701+1G>T
1	COL16A1	Exon55	splicing	c.3403-2_3403-1delAG
1	COL16A1	Exon25	frameshift insertion	c.1708_1709insG
2	COL16A1	Exon25	splicing	c.1656+1G>T
1	COL17A1	Exon43	frameshift insertion	c.2870dupG
1	COL19A1	Exon51	frameshift deletion	c.3339delA
4	COL1A1	Exon43	splicing	c.3099+1G>A
1	COL1A1	Exon31	frameshift deletion	c.2103delT
1	COL22A1	Exon65	frameshift deletion	c.4852delG
1	COL22A1	Exon64	frameshift deletion	c.4646delC
1	COL23A1	Exon14	splicing	c.774+2T>C
2	COL24A1	Exon36	stopgain SNV	c.3157G>T
3	COL24A1	Exon36	frameshift deletion	c.3152delC
1	COL25A1	Exon12	stopgain SNV	c.766delA
1	COL28A1	Exon30	stopgain SNV	c.2293C>T
2	COL28A1	Exon29	stopgain SNV	c.2263G>T
1	COL2A1	Exon52	frameshift deletion	c.4103delG
1	COL4A1	Exon51	stopgain	c.4874dupA

			SNV	
1	COL4A1	Exon46	frameshift deletion	c.4088delG
1	COL4A1	Exon37	frameshift deletion	c.3102_3103delAG
1	COL4A2	Exon42	frameshift insertion	c.3897_3898insCT
1	COL4A4	Exon48	frameshift deletion	c.4932delC
13	COL4A5	Exon8	frameshift deletion	c.459delT
1	COL4A5	Exon8	stopgain SNV	c.460delA
1	COL4A5	Exon44	frameshift insertion	c.4006_4007insA
1	COL4A6	Exon43	frameshift insertion	c.4499_4500insT
2	COL4A6	Exon29	frameshift insertion	c.2724_2725insC
1	COL5A1	Exon2	frameshift insertion	c.202dupT
1	COL5A2	Exon1	frameshift deletion	c.7delG
5	COL6A5	Exon8	frameshift deletion	c.3452delT
1	COL6A5	Exon35	stopgain SNV	c.5854C>T
2	COL6A5	Exon35	stopgain SNV	c.6148C>T
8	COL6A5	Exon38	stopgain SNV	c.6814G>T
1	COL7A1	Exon3	stopgain SNV	c.337A>T
1	COL7A1	Exon1	stopgain SNV	c.49G>T
1	COL9A1	Exon3	splicing	c.147+2T>A
1	COL9A2	Exon31	splicing	c.1604-10_1604-3del CTCCCTCC
2	COL9A2	Exon19	stopgain SNV	c.976C>T
1	COLEC11	Exon6	frameshift deletion	c.300delT
1	COLEC12	Exon5	frameshift deletion	c.761delA
1	COMMD10	Exon5	stopgain SNV	c.481C>T
1	COMMD2	Exon4	stopgain SNV	c.268G>T
1	COPB1	Exon15	frameshift deletion	c.1753delG
1	COPG	Exon17	frameshift deletion	c.1654delA
2	COPS7A	Exon8	stopgain SNV	c.805A>T
1	COPZ1	Exon4	frameshift deletion	c.243delC
1	COQ5	Exon5	stopgain SNV	c.736G>T
4	COQ6	Exon1	stopgain SNV	c.41G>A

1	CORO1C	Exon11	frameshift deletion	c.1311delT
1	CORO2A	Exon12	stoploss SNV	c.1577dupG
11	CORO2A	Exon12	stoploss SNV	c.1576T>A
1	CORO2A	Exon6	splicing	c.469-1G>C
1	CORO2B	Exon5	frameshift deletion	c.606_609delGAAG
2	COX6A1	Exon1	frameshift deletion	c.59delT
1	COX6B2	Exon3	frameshift insertion	c.194dupC
1	CPA1	Exon2	stopgain SNV	c.79C>T
2	CPA4	Exon7	stopgain SNV	c.678G>A
1	CPB2	Exon2	frameshift deletion	c.128delA
1	CPD	Exon2	frameshift deletion	c.868delT
1	CPEB3	Exon10	frameshift insertion	c.1881_1882insA
1	CPEB4	Exon1	frameshift deletion	c.325delG
1	CPNE1	Exon7	frameshift deletion	c.463delC
1	CPNE3	Exon13	splicing	c.1068+2T>G
1	CPNE7	Exon8	stopgain SNV	c.784C>T
1	CPNE9	Exon6	splicing	c.377+1G>A
1	CPO	Exon3	stopgain SNV	c.177G>A
1	CPS1	Exon15	frameshift deletion	c.1547delG
1	CPSF1	Exon25	frameshift deletion	c.2823_2824delAG
1	CPSF1	Exon25	frameshift deletion	c.2741_2754delAAGGTGGCGGCGCA
2	CPSF1	Exon4	frameshift deletion	c.205delG
1	CPSF1	Exon3	frameshift insertion	c.155_156insT
1	CPT2	Exon4	frameshift deletion	c.1239_1240delGA
3	CPVL	Exon13	stopgain SNV	c.1422T>A
1	CPVL	Exon11	frameshift deletion	c.1030delG
13	CPVL	Exon10	stopgain SNV	c.933T>A
1	CPXM1	Exon14	stoploss SNV	c.1982G>C
1	CPXM1	Exon5	frameshift deletion	c.623delT
1	CPXM2	Exon9	frameshift deletion	c.1149delG
1	CPXM2	Exon6	frameshift deletion	c.802delG
1	CPZ	Exon10	stopgain	c.1641C>G

			SNV	
1	CR2	Exon4	stopgain SNV	c.658C>T
1	CRAT	Exon10	frameshift deletion	c.1325delA
1	CRB1	Exon4	frameshift insertion	c.1745_1746dupAC
1	CRB1	Exon10	frameshift deletion	c.3703delA
1	CRBN	Exon5	splicing	c.527+1_527+1delG
1	CRCT1	Exon2	stopgain SNV	c.13C>T
1	CREB3L1	Exon10	splicing	c.1132-1G>A
1	CREB3L1	Exon11	splicing	c.1523+2_1523+2delT
3	CREBBP	Exon31	frameshift deletion	c.5605delA
1	CREG2	Exon4	stopgain SNV	c.809G>A
1	CRELD1	Exon7	frameshift deletion	c.785delG
1	CRELD1	Exon7	frameshift insertion	c.796dupG
1	CRHR2	Exon13	frameshift deletion	c.1254delG
3	CRHR2	Exon13	frameshift deletion	c.1241delT
1	CRHR2	Exon13	stopgain SNV	c.1231C>T
6	CRIPAK	Exon1	frameshift insertion	c.77_78dupCA
2	CRIPAK	Exon1	frameshift deletion	c.264_265delAT
1	CRIPAK	Exon1	frameshift deletion	c.272_276delATGTG
10	CRIPAK	Exon1	frameshift insertion	c.324_325dupCA
1	CRIPAK	Exon1	frameshift deletion	c.1160_1163delACAC
1	CRISP1	Exon6	stopgain SNV	c.502C>T
1	CRISPLD1	Exon2	stopgain SNV	c.9T>A
1	CRISPLD2	Exon11	splicing	c.1113-1_1113-1delG
1	CRLF1	Exon5	frameshift deletion	c.845_846delTG
1	CRNKL1	Exon2	stopgain SNV	c.148C>T
1	CROCC	Exon10	frameshift insertion	c.1207_1208insA
1	CROCC	Exon33	stopgain SNV	c.5383C>T
2	CROT	Exon18	frameshift insertion	c.1761dupA
1	CRTC2	Exon6	splicing	c.435-1G>A
1	CRX	Exon4	frameshift deletion	c.466_467delGG
1	CRY1	Exon10	frameshift deletion	c.1565delC
1	CRY1	Exon6	frameshift	c.801_802insG

			insertion	
1	CRY1	Exon6	frameshift deletion	c.797_798delAC
7	CRYBA4	Exon3	splicing	c.40-1G>C
1	CRYBA4	Exon3	stopgain SNV	c.67C>T
1	CRYBB2	Exon5	splicing	c.449+1G>A
1	CRYGA	Exon3	stopgain SNV	c.295C>T
2	CRYGA	Exon2	stopgain SNV	c.128G>A
1	CRYGC	Exon2	stopgain SNV	c.128G>A
20	CSAG1	Exon4	stopgain SNV	c.84C>G
1	CSAG1	Exon4	stopgain SNV	c.121C>T
1	CSDC2	Exon4	frameshift insertion	c.377_378dupAG
1	CSE1L	Exon6	frameshift insertion	c.485dupA
10	CSF1R	Exon16	frameshift deletion	c.2168_2169delAT
1	CSF1R	Exon6	stopgain SNV	c.789_790insT
1	CSF2RB	Exon7	frameshift insertion	c.747_748insGG
3	CSF2RB	Exon14	frameshift deletion	c.2124delC
1	CSF3	Exon3	frameshift deletion	c.198delA
3	CSGALNACT2	Exon5	stopgain SNV	c.1039C>T
1	CSH1	Exon4	frameshift deletion	c.345delC
2	CSH2	Exon3	stoploss SNV	c.367T>C
1	CSHL1	Exon3	frameshift insertion	c.189_190insCA
2	CSHL1	Exon3	frameshift deletion	c.146_149delTGGT
5	CSMD1	Exon58	stopgain SNV	c.8936G>A
10	CSMD1	Exon41	stoploss SNV	c.6196T>C
2	CSMD1	Exon15	stopgain SNV	c.2079G>A
1	CSMD2	Exon65	frameshift deletion	c.9947_9948delTG
1	CSMD3	Exon44	stopgain SNV	c.6708G>A
1	CSMD3	Exon30	stopgain SNV	c.4780C>T
1	CSMD3	Exon1	frameshift deletion	c.115_118delGGGA
4	CSN1S1	Exon7	splicing	c.154-1G>C
1	CS	Exon6	stopgain SNV	c.423G>A
1	CSPG4	Exon10	frameshift deletion	c.6392delA

1	CSPG4	Exon10	frameshift insertion	c.6384dupC
1	CSPG4	Exon10	frameshift deletion	c.5997delC
1	CSPG4	Exon5	frameshift deletion	c.4305delC
1	CSPP1	Exon19	frameshift deletion	c.2506_2509delATTG
2	CST2	Exon2	stopgain SNV	c.271C>T
1	CST3	Exon3	stopgain SNV	c.397C>T
1	CST3	Exon2	frameshift deletion	c.277_296del GAGCTGGGCCGAACCACGTG
1	CST4	Exon2	frameshift insertion	c.241dupG
1	CST7	Exon2	frameshift deletion	c.97delC
1	CST8	Exon3	stopgain SNV	c.252C>A
1	CST8	Exon3	stopgain SNV	c.322C>T
1	CST9	Exon2	frameshift deletion	c.390delT
1	CSTL1	Exon3	splicing	c.330+2T>C
1	CT62	Exon4	stopgain SNV	c.207T>A
1	CTAGE9	Exon1	frameshift deletion	c.1462_1465delCAAA
14	CTBP2	Exon11	stopgain SNV	c.1333C>T
7	CTBP2	Exon11	frameshift deletion	c.1291delC
1	CTC1	Exon21	splicing	c.3221+1G>A
1	CTCFL	Exon2	frameshift insertion	c.382_383insCG
5	CTDSP2	Exon7	frameshift deletion	c.639_640delCC
6	CTDSP2	Exon7	frameshift deletion	c.636delG
1	CTF1	Exon2	splicing	c.26-2A>T
2	CTH	Exon11	frameshift deletion	c.1064delC
1	CTNNA2	Exon18	stopgain SNV	c.2690T>G
1	CTNNA3	Exon15	frameshift deletion	c.2104_2105delAT
3	CTNNAL1	Exon11	stopgain SNV	c.1547C>G
15	CTNND2	Exon22	splicing	c.3417+2_3417+5dupTAAA
1	CTPS	Exon18	splicing	c.1692-1G>C
1	CTR9	Exon4	frameshift deletion	c.429delC
1	CTSA	Exon2	frameshift deletion	c.51delG
1	CTSA	Exon2	frameshift deletion	c.53_54delTG
1	CTSB	Exon6	stopgain SNV	c.423C>A

1	CTSB	Exon5	stopgain SNV	c.265C>T
1	CTSC	Exon7	frameshift deletion	c.1122delT
1	CTSE	Exon6	splicing	c.785+2T>C
1	CTSE	Exon9	splicing	c.1027-2_1027-2delA
1	CTSE	Exon9	stopgain SNV	c.1126C>T
1	CTSW	Exon3	frameshift deletion	c.247delA
1	CTSW	Exon10	splicing	c.1021-1G>C
1	CUBN	Exon66	stopgain SNV	c.10612G>T
1	CUBN	Exon14	frameshift deletion	c.1690_1693delCTCT
1	CUL4B	Exon3	frameshift insertion	c.294_295insA
1	CUL7	Exon25	stopgain SNV	c.4969C>T
1	CUL7	Exon12	splicing	c.2650-2A>C
1	CUL9	Exon4	frameshift deletion	c.963delG
1	CUL9	Exon4	frameshift deletion	c.972_976delCGAAC
1	CUL9	Exon26	frameshift deletion	c.5165delC
1	CUTA	Exon5	stoploss SNV	c.470G>C
1	CUTC	Exon8	frameshift insertion	c.668dupG
2	CWC22	Exon11	splicing	c.1147+2dupT
1	CWC25	Exon11	splicing	c.1164-10_1164-2del CTCTTCTA
1	CWC25	Exon8	stopgain SNV	c.979C>T
5	CWC25	Exon3	frameshift deletion	c.262delC
9	CWH43	Exon12	frameshift deletion	c.1596delA
4	CWH43	Exon16	frameshift deletion	c.2088delA
1	CX3CR1	Exon2	frameshift deletion	c.984delT
1	CXADR	Exon4	frameshift deletion	c.544_545delCA
1	CXCL5	Exon1	frameshift deletion	c.30delT
7	CXCL6	Exon2	frameshift insertion	c.239dupT
1	CXCL9	Exon4	stopgain SNV	c.340C>T
1	CXCR2	Exon4	frameshift deletion	c.674delT
1	CXORF22	Exon11	stopgain SNV	c.1936A>T
1	CXORF22	Exon16	frameshift deletion	c.2857delC
1	CXORF23	Exon2	stopgain SNV	c.366C>G

1	CXORF40B	Exon4	frameshift deletion	c.110_111delGT
2	CXORF56	Exon2	frameshift insertion	c.155_156insT
7	CXORF58	Exon4	splicing	c.311+1G>A
2	CYB561D2	Exon4	stopgain SNV	c.661C>T
1	CYB5D1	Exon2	splicing	c.237+1G>C
1	CYB5R1	Exon6	splicing	c.346-1G>T
1	CYB5R4	Exon1	frameshift insertion	c.66dupG
1	CYB5R4	Exon3	stopgain SNV	c.255T>G
1	CYFIP1	Exon29	frameshift deletion	c.3315delT
1	CYFIP1	Exon29	frameshift deletion	c.3325delT
1	CYFIP2	Exon11	frameshift deletion	c.1096delT
2	CYFIP2	Exon12	stopgain SNV	c.1204A>T
1	CYP11B2	Exon3	frameshift deletion	c.510_514delGGCCC
1	CYP11B2	Exon3	splicing	c.395+1G>A
1	CYP11B2	Exon1	frameshift deletion	c.63_64delAC
1	CYP19A1	Exon11	frameshift deletion	c.1386delA
16	CYP19A1	Exon5	frameshift deletion	c.411delT
1	CYP1A1	Exon7	stopgain SNV	c.1371delT
1	CYP1A1	Exon2	frameshift deletion	c.316delC
1	CYP1B1	Exon3	frameshift insertion	c.1200_1209dup TCATGCCACC
1	CYP24A1	Exon6	stopgain SNV	c.803G>A
1	CYP24A1	Exon2	frameshift deletion	c.351_352delGC
1	CYP26C1	Exon4	frameshift insertion	c.845_851dupCCATGCA
3	CYP2A13	Exon2	stopgain SNV	c.301C>T
1	CYP2A13	Exon8	frameshift insertion	c.1228dupG
1	CYP2A6	Exon9	stopgain SNV	c.1400C>A
5	CYP2C18	Exon2	stopgain SNV	c.204T>A
1	CYP2C19	Exon4	stopgain SNV	c.636G>A
1	CYP2C9	Exon4	splicing	c.642+2T>A
2	CYP2C9	Exon5	frameshift deletion	c.818delA
11	CYP2D6	Exon5	frameshift deletion	c.775delA
1	CYP2D6	Exon3	frameshift deletion	c.454delT

2	CYP2E1	Exon4	splicing	c.648+1G>A
1	CYP2J2	Exon2	frameshift deletion	c.232delC
1	CYP2S1	Exon4	stopgain SNV	c.595C>T
1	CYP3A43	Exon3	stopgain SNV	c.204C>G
1	CYP3A4	Exon13	frameshift insertion	c.1461dupA
1	CYP3A4	Exon8	frameshift insertion	c.719dupT
2	CYP3A5	Exon12	frameshift deletion	c.1372delG
5	CYP3A5	Exon11	frameshift insertion	c.1035dupT
4	CYP3A5	Exon4	frameshift deletion	c.258delT
1	CYP3A5	Exon4	frameshift insertion	c.247dupG
2	CYP3A5	Exon2	frameshift insertion	c.92dupG
1	CYP46A1	Exon5	splicing	c.443+1_443+2insGCT
1	CYP4A22	Exon5	stopgain SNV	c.559C>T
1	CYP4A22	Exon8	frameshift deletion	c.901delG
1	CYP4B1	Exon2	stopgain SNV	c.285T>A
1	CYP4F11	Exon1	frameshift deletion	c.53delC
2	CYP4F12	Exon8	splicing	c.985+1G>A
1	CYP4F3	Exon3	stopgain SNV	c.269G>A
1	CYP4F8	Exon12	splicing	c.1314-1G>C
1	CYP7A1	Exon3	stopgain SNV	c.592C>T
1	CYP8B1	Exon1	frameshift deletion	c.638delT
1	CYTH1	Exon11	splicing	c.813-2G>T
1	CYYR1	Exon3	splicing	c.176+1G>A
1	DAB2IP	Exon11	frameshift deletion	c.1955delC
1	DAB2IP	Exon13	frameshift insertion	c.2989dupC
1	DAB2	Exon12	frameshift insertion	c.1627_1628insT
1	DAB2	Exon12	frameshift deletion	c.1595delT
1	DAGLB	Exon3	frameshift deletion	c.268_269delCC
1	DAK	Exon3	frameshift insertion	c.63_64insA
5	DAPL1	Exon4	stopgain SNV	c.313C>T
1	DARS2	Exon5	splicing	c.492+2T>C
1	DAXX	Exon3	frameshift insertion	c.589dupC
1	DAZAP1	Exon3	frameshift deletion	c.211delA

4	DBF4B	Exon1	splicing	c.19+1G>T
1	DBF4	Exon5	frameshift deletion	c.500delT
1	DBT	Exon2	frameshift deletion	c.75_76delAT
2	DCAF11	Exon15	stopgain SNV	c.1536C>A
1	DCAF15	Exon7	frameshift deletion	c.851delC
1	DCAF4L2	Exon1	frameshift deletion	c.1115_1116delTC
2	DCAF4L2	Exon1	frameshift deletion	c.145delC
18	DCAF4L2	Exon1	frameshift insertion	c.131dupG
1	DCAF4L2	Exon1	frameshift deletion	c.49_50delAA
1	DCAF6	Exon19	frameshift deletion	c.2504delT
7	DCAKD	Exon2	frameshift deletion	c.21_22delAG
7	DCDC2B	Exon1	frameshift insertion	c.52dupG
1	DCDC5	Exon11	stopgain SNV	c.1240G>T
1	DCD	Exon4	frameshift insertion	c.225dupA
1	DCHS1	Exon2	frameshift deletion	c.1463delC
1	DCLRE1A	Exon2	stopgain SNV	c.572C>A
2	DCLRE1A	Exon1	stopgain SNV	c.412C>T
1	DCP1A	Exon7	frameshift deletion	c.780_781delTC
1	DCST2	Exon8	frameshift deletion	c.1213delT
1	DCST2	Exon4	frameshift deletion	c.726delT
1	DCTN1	Exon18	frameshift deletion	c.2332delG
3	DCTN1	Exon6	frameshift deletion	c.707delA
1	DCTN6	Exon3	splicing	c.194+1_194+2insTC
1	DCUN1D2	Exon3	stopgain SNV	c.262C>T
1	DDB1	Exon6	frameshift insertion	c.685dupG
2	DDIT3	Exon4	frameshift insertion	c.332_333insTG
1	DDIT4	Exon3	frameshift deletion	c.275delT
1	DDO	Exon5	stopgain SNV	c.632delC
1	DDOST	Exon5	frameshift deletion	c.597delT
1	DDOST	Exon5	frameshift deletion	c.591delT
3	DDTL	Exon3	frameshift deletion	c.341_342delGA

3	DDTL	Exon3	frameshift deletion	c.345_346delGA
1	DDX25	Exon7	splicing	c.622+1G>T
1	DDX27	Exon14	frameshift deletion	c.1658delG
1	DDX27	Exon20	stopgain SNV	c.2344C>T
1	DDX39A	Exon10	frameshift insertion	c.1131_1132insTT
1	DDX41	Exon9	frameshift deletion	c.825delC
1	DDX42	Exon15	splicing	c.1902+1_1902+1delG
1	DDX49	Exon11	frameshift deletion	c.1166delA
1	DDX49	Exon13	frameshift deletion	c.1273delC
8	DDX54	Exon18	stopgain SNV	c.2274C>G
2	DDX55	Exon14	frameshift insertion	c.1775_1776dupGG
1	DDX58	Exon18	frameshift insertion	c.2587_2590dupTTCT
1	DDX59	Exon2	frameshift deletion	c.110delG
1	DDX60L	Exon30	stopgain SNV	c.4063C>T
2	DDX60L	Exon18	splicing	c.2245-1G>A
1	DDX60L	Exon4	frameshift deletion	c._del
1	DDX60	Exon36	frameshift deletion	c.4941delA
1	DDX60	Exon5	stopgain SNV	c.358C>T
4	DEFA6	Exon1	stopgain SNV	c.121C>T
1	DEFB108B	Exon1	frameshift deletion	c.33delC
1	DEFB126	Exon2	frameshift deletion	c.222_225delGACA
1	DEFB126	Exon2	frameshift deletion	c.313_314delAC
17	DEFB128	Exon2	frameshift insertion	c.183dupA
2	DEFB132	Exon2	stoploss SNV	c.287A>C
2	DEM1	Exon3	frameshift deletion	c.794_795delTG
15	DEM1	Exon3	frameshift insertion	c.1029_1030insG
10	DENND1B	Exon21	stopgain SNV	c.1525A>T
1	DENND1C	Exon3	frameshift insertion	c.124dupC
1	DENND1C	Exon3	frameshift insertion	c.114_115insA
1	DENND2D	Exon1	stopgain SNV	c.61C>T
1	DENND4B	Exon3	frameshift deletion	c.533delC
1	DENND4C	Exon18	stopgain	c.3452C>G

			SNV	
1	DENND4C	Exon21	frameshift deletion	c.3864delC
1	DEPDC1	Exon10	frameshift deletion	c.2065_2068delTTAC
1	DEPDC7	Exon2	frameshift deletion	c.430_433delTTAG
1	DEPTOR	Exon2	frameshift deletion	c.284_288delGGGGC
1	DERL3	Exon4	frameshift deletion	c.314delG
1	DFFA	Exon4	frameshift deletion	c.477_480delGGAA
6	DFNA5	Exon2	frameshift insertion	c.119dupA
1	DGAT2L6	Exon4	stopgain SNV	c.451C>T
16	DGAT2	Exon3	stopgain SNV	c.355A>T
1	DGCR14	Exon10	stopgain SNV	c.1418C>A
17	DGCR2	Exon8	stopgain SNV	c.1123G>T
1	DGCR8	Exon2	frameshift insertion	c.65_66insT
1	DGCR8	Exon2	frameshift deletion	c.126_127delGT
1	DGCR8	Exon2	frameshift insertion	c.131_132insGG
1	DGCR8	Exon2	frameshift deletion	c.376delG
1	DHCR24	Exon5	frameshift insertion	c.717_718insA
1	DHCR24	Exon5	stopgain SNV	c.711C>A
3	DHCR7	Exon10	splicing	c.964-1G>C
1	DHCR7	Exon6	stopgain SNV	c.452G>A
1	DHDH	Exon2	stopgain SNV	c.139C>T
1	DHRS12	Exon7	frameshift deletion	c.478delG
1	DHRS2	Exon3	stopgain SNV	c.208C>T
1	DHRS2	Exon7	frameshift deletion	c.666delC
1	DHRS3	Exon2	frameshift deletion	c.331delC
1	DHRS3	Exon2	frameshift deletion	c.326_327delCC
6	DHRS4L2	Exon4	frameshift insertion	c.203_204insA
1	DHRS7B	Exon4	frameshift deletion	c.425delA
1	DHTKD1	Exon7	stopgain SNV	c.1246C>T
1	DHTKD1	Exon7	splicing	c.1358+1G>A
1	DHX30	Exon6	frameshift deletion	c.353delG
1	DHX30	Exon6	stopgain	c.354C>A

			SNV	
1	DHX32	Exon11	frameshift deletion	c.2156_2157delCT
1	DHX32	Exon7	splicing	c.1193-1G>C
1	DHX37	Exon10	frameshift insertion	c.1294_1295insC
1	DHX37	Exon10	frameshift insertion	c.1293_1294insT
1	DHX40	Exon14	stopgain SNV	c.1627C>T
1	DHX58	Exon10	frameshift deletion	c.1340delT
1	DHX58	Exon6	splicing	c.561+1_561+2delGT
1	DHX58	Exon5	stopgain SNV	c.472C>T
2	DIAPH1	Exon15	frameshift insertion	c.2081dupC
1	DIAPH3	Exon21	frameshift deletion	c.2546delA
1	DIDO1	Exon16	frameshift deletion	c.5384delC
1	DIDO1	Exon3	frameshift deletion	c.137delA
1	DIDO1	Exon3	frameshift deletion	c.133delG
18	DIMT1	Exon11	frameshift deletion	c.876delC
2	DIMT1	Exon9	splicing	c.571-2A>G
1	DIP2A	Exon5	frameshift deletion	c.489delC
3	DIP2C	Exon31	stopgain SNV	c.3805G>T
3	DIS3	Exon21	stoploss SNV	c.2875T>C
1	DIS3	Exon2	stopgain SNV	c.274C>T
1	DISP2	Exon8	frameshift deletion	c.2411delG
1	DIXDC1	Exon15	splicing	c.1526+1G>A
1	DKK3	Exon3	stopgain SNV	c.337C>T
1	DKKL1	Exon5	frameshift insertion	c.270_271insT
1	DLC1	Exon13	frameshift insertion	c.3730_3731insG
1	DLEC1	Exon25	frameshift insertion	c.3654_3655insTG
1	DLEC1	Exon27	splicing	c.3786-1G>A
1	DLEC1	Exon36	stopgain SNV	c.5088C>A
1	DLGAP3	Exon1	frameshift deletion	c.566delC
1	DLGAP3	Exon1	frameshift insertion	c.254dupG
1	DLGAP5	Exon19	stopgain SNV	c.2491C>T
1	DLL3	Exon7	splicing	c.1673+1G>A
1	DLX3	Exon1	frameshift insertion	c.181_182insCCCA

1	DLX3	Exon1	stopgain SNV	c.79A>T
1	DMBT1	Exon7	frameshift deletion	c.575delG
1	DMBT1	Exon40	stopgain SNV	c.4942C>T
1	DMC1	Exon9	frameshift deletion	c.579delA
2	DMD	Exon41	frameshift deletion	c.5851delA
1	DMD	Exon8	splicing	c.507-11_507-6delATGTGT
3	DMGDH	Exon6	stopgain SNV	c.972G>A
1	DMGDH	Exon6	stopgain SNV	c.856C>T
1	DMKN	Exon2	frameshift deletion	c.571delG
1	DMRTA2	Exon3	stoploss SNV	c.892T>A
17	DMXL1	Exon18	frameshift deletion	c.4445delG
1	DMXL1	Exon18	frameshift deletion	c.4457delC
1	DNAH10	Exon9	stopgain SNV	c.1135C>T
1	DNAH10	Exon49	frameshift deletion	c.8272delC
1	DNAH10	Exon73	stopgain SNV	c.12520C>T
1	DNAH10	Exon76	frameshift deletion	c.13032delG
1	DNAH10	Exon77	stopgain SNV	c.13163G>A
7	DNAH11	Exon1	stopgain SNV	c.100G>T
1	DNAH11	Exon11	stopgain SNV	c.1915C>T
1	DNAH11	Exon37	stopgain SNV	c.6286C>T
2	DNAH11	Exon61	stoploss SNV	c.9957A>T
1	DNAH11	Exon63	splicing	c.10354+2T>C
1	DNAH11	Exon71	stopgain SNV	c.11692C>T
1	DNAH14	Exon2	stopgain SNV	c.55G>T
1	DNAH14	Exon6	stopgain SNV	c.604A>T
1	DNAH14	Exon15	frameshift deletion	c.1867delT
2	DNAH14	Exon19	frameshift deletion	c.2973delC
1	DNAH14	Exon30	frameshift insertion	c.4872dupA
3	DNAH14	Exon37	frameshift deletion	c.5773_5776delAAAG
1	DNAH17	Exon55	frameshift insertion	c.8771_8772insT
1	DNAH17	Exon26	splicing	c.3864+1_3864+3delGTG
1	DNAH1	Exon65	frameshift	c.10468_10471delAGAG

			deletion	
1	DNAH1	Exon71	frameshift deletion	c.11275delC
1	DNAH1	Exon72	frameshift deletion	c.11464_11476del TGCTTGTTCCATG
1	DNAH2	Exon8	frameshift deletion	c.1331delG
3	DNAH2	Exon45	frameshift deletion	c.7068delG
1	DNAH2	Exon65	stopgain SNV	c.10026G>A
1	DNAH2	Exon82	frameshift deletion	c.12806delG
1	DNAH3	Exon53	stopgain SNV	c.9134T>G
5	DNAH3	Exon14	stopgain SNV	c.2028T>A
1	DNAH3	Exon7	stopgain SNV	c.1017G>A
1	DNAH5	Exon62	stopgain SNV	c.10441C>T
1	DNAH5	Exon58	splicing	c.9606-2A>C
1	DNAH5	Exon56	frameshift insertion	c.9431_9432insT
1	DNAH5	Exon48	frameshift deletion	c.7946delG
1	DNAH6	Exon11	stopgain SNV	c.1801A>T
3	DNAH7	Exon65	stopgain SNV	c.11934T>A
1	DNAH7	Exon40	stopgain SNV	c.6429dupT
1	DNAH7	Exon35	stopgain SNV	c.5600T>A
2	DNAH7	Exon30	stopgain SNV	c.4787dupA
1	DNAH7	Exon27	stopgain SNV	c.4309C>T
2	DNAH7	Exon24	frameshift deletion	c.3833delA
1	DNAH7	Exon14	stopgain SNV	c.1687C>T
2	DNAH8	Exon12	splicing	c.1764+2T>C
3	DNAH8	Exon18	frameshift deletion	c.2457delT
1	DNAH8	Exon50	stopgain SNV	c.7084C>T
1	DNAH8	Exon77	splicing	c.11563+1G>T
1	DNAH8	Exon90	frameshift deletion	c.13393delA
1	DNAH9	Exon20	splicing	c.4614+2T>A
1	DNAH9	Exon46	stopgain SNV	c.8761delG
1	DNAI1	Exon1	splicing	c.48+2dupT
1	DNAI1	Exon13	frameshift deletion	c.1200delA
3	DNAI1	Exon13	frameshift deletion	c.1203delA
1	DNAJB1	Exon1	frameshift	c.170_171delAC

			deletion	
1	DNAJB3	Exon1	frameshift deletion	c.375delG
3	DNAJB4	Exon2	stopgain SNV	c.215T>A
15	DNAJB7	Exon1	frameshift insertion	c.164dupT
2	DNAJC10	Exon13	frameshift deletion	c.1133delA
2	DNAJC11	Exon14	frameshift deletion	c.1510delA
1	DNAJC12	Exon2	frameshift deletion	c.85delC
1	DNAJC13	Exon6	frameshift insertion	c.431_432insA
2	DNAJC13	Exon6	frameshift deletion	c.448_449delTC
2	DNAJC14	Exon2	stopgain SNV	c.832C>T
1	DNAJC15	Exon4	splicing	c.311+1G>A
1	DNAJC16	Exon7	stopgain SNV	c.1021C>T
4	DNAJC18	Exon5	stopgain SNV	c.606C>G
1	DNAJC21	Exon12	frameshift deletion	c.1494delT
1	DNAJC28	Exon2	stopgain SNV	c.928C>T
1	DNAJC5	Exon4	frameshift deletion	c.478delC
1	DNASE2B	Exon6	stopgain SNV	c.1051C>T
1	DNASE2	Exon6	frameshift deletion	c.956_957delAG
1	DNHD1	Exon10	splicing	c.1837+2T>C
1	DNHD1	Exon25	frameshift insertion	c.7644_7645insT
2	DNHD1	Exon36	stopgain SNV	c.12142C>T
1	DNM2	Exon18	frameshift deletion	c.2035delA
1	DNMBP	Exon4	frameshift deletion	c.1341_1359del TCCCCTAGAAGCAAGGACT
1	DNMT3A	Exon20	frameshift insertion	c.2357_2360dupCAGC
1	DNMT3B	Exon9	frameshift insertion	c.1047dupA
1	DOCK10	Exon43	stopgain SNV	c.4727C>G
1	DOCK1	Exon45	splicing	c.4629+2T>C
3	DOCK3	Exon24	frameshift deletion	c.2440_2441delGT
1	DOCK5	Exon17	frameshift deletion	c.1672delG
1	DOCK6	Exon45	frameshift insertion	c.5755_5756insT
2	DOCK6	Exon33	splicing	c.4022-2dupA
1	DOCK7	Exon48	frameshift deletion	c.6145_6146delAA

1	DOCK7	Exon20	stopgain SNV	c.2263C>T
1	DOCK8	Exon12	frameshift deletion	c.1371_1372delTG
4	DOCK8	Exon47	stopgain SNV	c.6207C>A
1	DOK1	Exon5	stopgain SNV	c.714T>A
1	DOK5	Exon7	frameshift deletion	c.844delT
2	DOLK	Exon1	frameshift insertion	c.1dupA
1	DOM3Z	Exon3	frameshift deletion	c.544_548delCGGGA
1	DOM3Z	Exon2	frameshift deletion	c.61_64delAAAC
1	DONSON	Exon10	splicing	c.1563+1G>A
11	DOPEY2	Exon30	frameshift deletion	c.5853delC
2	DPEP2	Exon4	stopgain SNV	c.489T>G
1	DPP3	Exon7	splicing	c.798+1_798+1delG
1	DPP6	Exon8	splicing	c.571-1G>A
1	DPP6	Exon19	frameshift deletion	c.1662delC
3	DPP7	Exon13	frameshift insertion	c.1461dupG
10	DPP8	Exon17	frameshift deletion	c.2136delT
1	DPP9	Exon17	frameshift deletion	c.1961delT
1	DPP9	Exon17	frameshift deletion	c.1959delG
1	DPP9	Exon12	frameshift deletion	c.1225delC
5	DPP9	Exon8	stopgain SNV	c.879G>A
1	DPP9	Exon6	splicing	c.314-1G>A
1	DPPA2	Exon6	frameshift deletion	c.646_647delAT
1	DPPA2	Exon4	frameshift insertion	c.244_245insAATT
1	DPPA3	Exon3	frameshift deletion	c.341_344delCAAC
1	DPPA4	Exon3	frameshift deletion	c.180delG
5	DPPA4	Exon4	splicing	c.179-1_179-1delG
1	DPRX	Exon3	stopgain SNV	c.466C>T
1	DPY19L2	Exon21	stopgain SNV	c.2038A>T
1	DPY19L4	Exon12	frameshift deletion	c.1272_1273delCT
1	DPYD	Exon20	frameshift deletion	c.2579delA
3	DPYD	Exon15	splicing	c.1905+1G>A
1	DQX1	Exon10	stopgain SNV	c.1714C>T
1	DQX1	Exon10	stopgain	c.1635G>A

			SNV	
1	DQX1	Exon6	stopgain SNV	c.1063C>T
1	DQX1	Exon4	stopgain SNV	c.637C>T
1	DRAM2	Exon6	stopgain SNV	c.494G>A
1	DRD3	Exon8	splicing	c.1007-2A>G
2	DRD5	Exon1	stopgain SNV	c.1005C>A
1	DROSHA	Exon4	frameshift deletion	c.115_116delCT
6	DSC2	Exon16	frameshift insertion	c.2686_2687dupGA
1	DSC2	Exon16	frameshift deletion	c.2655delT
15	DSCAML1	Exon20	frameshift deletion	c.3883delC
5	DSCAML1	Exon20	frameshift deletion	c.3879delT
1	DSCAM	Exon17	frameshift insertion	c.3203dupA
1	DSCAM	Exon9	frameshift deletion	c.1899delT
1	DSCC1	Exon6	splicing	c.716+1G>A
2	DSCR3	Exon3	frameshift deletion	c.258delC
2	DSCR6	Exon4	stopgain SNV	c.292C>T
1	DSEL	Exon2	frameshift deletion	c.2653delA
1	DSG4	Exon16	frameshift insertion	c.2476dupG
1	DSN1	Exon10	stopgain SNV	c.703C>T
1	DSP	Exon17	splicing	c.2436+2T>C
1	DST	Exon1	frameshift deletion	c.22delT
4	DTNBP1	Exon9	splicing	c.667+2C>T
1	DTNBP1	Exon8	stopgain SNV	c.664C>T
1	DTWD1	Exon3	stopgain SNV	c.169A>T
1	DTX3L	Exon3	stopgain SNV	c.1209T>G
1	DUOX1	Exon18	stopgain SNV	c.1948C>T
1	DUOX1	Exon28	frameshift deletion	c.3552delG
1	DUOX1	Exon31	frameshift insertion	c.3982dupC
1	DUOX2	Exon19	frameshift insertion	c.2406_2407insCTAC
2	DUOX2	Exon11	splicing	c.1041-2A>C
1	DUOXA1	Exon6	frameshift deletion	c.294delT
1	DUSP11	Exon1	frameshift deletion	c.51_52delTT
1	DUSP12	Exon6	frameshift	c.956_957insC

			insertion	
2	DUSP16	Exon7	frameshift deletion	c.1085_1089delGCGTG
2	DUSP16	Exon7	frameshift deletion	c.1080_1083delGCCC
3	DUSP18	Exon2	frameshift deletion	c.491_492delTG
1	DUSP18	Exon2	stopgain SNV	c.40C>T
1	DUSP1	Exon4	frameshift deletion	c.1081delA
1	DUSP1	Exon4	frameshift deletion	c.738_739delCA
1	DUSP1	Exon3	frameshift insertion	c.626_627insAG
2	DUSP6	Exon3	stopgain SNV	c.899C>A
4	DUXA	Exon6	frameshift deletion	c.573delC
1	DVL3	Exon5	stopgain SNV	c.502C>T
3	DYDC2	Exon4	splicing	c.148-2A>G
1	DYDC2	Exon5	frameshift deletion	c.368delC
1	DYNC1H1	Exon8	frameshift deletion	c.2093delT
1	DYNC1I1	Exon14	frameshift deletion	c.1556delG
1	DYNC1LI1	Exon8	stopgain SNV	c.1012G>T
2	DYNC1LI2	Exon13	frameshift deletion	c.1379delG
8	DYNC2H1	Exon23	stopgain SNV	c.3381T>A
1	DYNC2H1	Exon47	frameshift deletion	c.7705delT
4	DYNC2H1	Exon47	stopgain SNV	c.7706C>A
4	DYNC2H1	Exon49	stopgain SNV	c.8055T>G
1	DYNC2H1	Exon70	frameshift deletion	c.10527_10528delGT
1	DYNC2LI1	Exon6	frameshift deletion	c.420delA
1	DYNC2LI1	Exon7	splicing	c.508-1G>A
2	DYRK1A	Exon6	stopgain SNV	c.340A>T
1	DYRK2	Exon3	frameshift deletion	c.1081delA
2	DYTN	Exon11	frameshift insertion	c.1281_1282dupGG
1	DYX1C1	Exon5	stopgain SNV	c.583delA
1	DZANK1	Exon19	splicing	c.1890+1dupG
1	E2F8	Exon13	stopgain SNV	c.2569C>T
1	EBF4	Exon3	frameshift deletion	c.242delT
1	EBI3	Exon3	splicing	c.379+1_379+1delG

10	EBLN2	Exon1	stopgain SNV	c.492T>G
1	ECD	Exon10	frameshift deletion	c.1241delT
1	ECE1	Exon15	frameshift insertion	c.1702_1703dupCA
1	ECEL1	Exon14	stopgain SNV	c.1920C>G
1	ECHDC2	Exon5	frameshift insertion	c.399dupG
1	ECHDC3	Exon4	splicing	c.591+2_591+2delT
1	ECHDC3	Exon5	stopgain SNV	c.781C>T
1	ECM2	Exon4	frameshift deletion	c.888_900del CGGGTGCTCTCTG
1	ECT2L	Exon16	splicing	c.2028+1_2028+9del GTAAATGAG
5	ECT2L	Exon22	stopgain SNV	c.2593A>T
1	ECT2	Exon8	frameshift deletion	c.797delG
2	ECT2	Exon8	frameshift deletion	c.798delA
1	ECT2	Exon10	stopgain SNV	c.1039_1040insGTGA
5	EDA2R	Exon6	frameshift deletion	c.716delG
1	EDA2R	Exon6	frameshift deletion	c.670delT
1	EDA	Exon2	frameshift deletion	c.452delG
1	EDC4	Exon5	frameshift deletion	c.508_509delAC
1	EDC4	Exon6	frameshift deletion	c.689_690delAC
1	EDDM3B	Exon2	stopgain SNV	c.268C>T
1	EDEM1	Exon10	splicing	c.1680+1G>C
1	EDN1	Exon2	frameshift deletion	c.76delG
1	EDN3	Exon2	stopgain SNV	c.306C>G
1	EDN3	Exon3	stopgain SNV	c.400G>T
1	EDNRB	Exon2	frameshift insertion	c.360_361insGA
1	EEF2K	Exon6	stopgain SNV	c.616C>T
1	EEF2K	Exon16	stopgain SNV	c.1852C>T
1	EEF2	Exon2	frameshift deletion	c.209delT
2	EFCAB3	Exon6	stopgain SNV	c.451C>T
2	EFCAB5	Exon1	splicing	c.42+1G>A
1	EFCAB5	Exon10	stopgain SNV	c.1852C>T
1	EFCAB5	Exon12	splicing	c.2273-2_2273-1insT
8	EFCAB6	Exon27	frameshift deletion	c.3563_3564delAG

1	EFCAB6	Exon25	splicing	c.2773-2A>G
1	EFCAB7	Exon4	frameshift deletion	c.474delT
1	EFCAB7	Exon12	stopgain SNV	c.1528G>T
2	EFEMP2	Exon5	frameshift insertion	c.468dupC
3	EFHA1	Exon9	stopgain SNV	c.916A>T
1	EFHA1	Exon1	frameshift insertion	c.190dupA
1	EFHB	Exon5	frameshift deletion	c.1287delA
1	EFHC1	Exon4	frameshift deletion	c.682_692delGACTTTGATCA
18	EFNB1	Exon2	frameshift deletion	c.251delA
1	EFR3A	Exon4	frameshift deletion	c.310delG
1	EFR3A	Exon6	frameshift deletion	c.489delG
4	EGFL8	Exon3	stopgain SNV	c.222C>G
5	EGF	Exon23	frameshift insertion	c.3280dupC
1	EGFR	Exon3	frameshift deletion	c.287delT
1	EGFR	Exon21	frameshift deletion	c.2509delG
1	EGFR	Exon27	splicing	c.3163-1_3163-1delG
1	EGFR	Exon27	frameshift deletion	c.3165delG
3	EGLN2	Exon4	frameshift insertion	c.990_991insCT
1	EHBP1L1	Exon14	frameshift deletion	c.4036delA
1	EHD3	Exon2	frameshift deletion	c.271delG
1	EHD3	Exon4	frameshift deletion	c.679delC
1	EHD4	Exon4	frameshift deletion	c.690delG
1	EIF2AK3	Exon17	frameshift deletion	c.3268_3271delCAGA
1	EIF2AK4	Exon9	frameshift deletion	c.1532delA
4	EIF2AK4	Exon34	splicing	c.4561+2T>G
4	EIF2A	Exon8	frameshift deletion	c.573_574delTA
2	EIF2B2	Exon2	splicing	c.284+2T>G
2	EIF2B3	Exon4	frameshift deletion	c.450delA
1	EIF2B5	Exon4	frameshift insertion	c.602dupT
11	EIF2B5	Exon16	stoploss SNV	c.2164T>A
1	EIF2D	Exon11	splicing	c.921-2A>G
8	EIF3I	Exon11	stopgain SNV	c.939C>G

1	EIF3L	Exon7	frameshift deletion	c.761_762delAG
1	EIF4E1B	Exon8	splicing	c.614+1G>T
1	ELAC2	Exon15	frameshift insertion	c.1334_1335insC
1	ELAC2	Exon8	splicing	c.560-2A>G
1	ELFN2	Exon3	frameshift deletion	c.1365delC
1	ELFN2	Exon3	frameshift insertion	c.1357_1358insGGAG
1	ELMO3	Exon10	frameshift deletion	c.984delC
1	ELMO3	Exon10	frameshift deletion	c.991delA
1	ELMO3	Exon13	stopgain SNV	c.1342A>T
1	ELMOD2	Exon2	frameshift insertion	c.1dupA
1	ELN	Exon26	frameshift deletion	c.1776delA
1	EME1	Exon2	frameshift insertion	c.735dupA
1	EME1	Exon8	stopgain SNV	c.1484G>A
8	EME1	Exon8	stopgain SNV	c.1510C>T
1	EMILIN2	Exon4	stopgain SNV	c.553C>T
1	EMILIN2	Exon8	frameshift deletion	c.2887_2888delGA
1	EML3	Exon10	frameshift deletion	c.1175delG
3	EML5	Exon17	frameshift deletion	c.2493delA
4	EML6	Exon25	stopgain SNV	c.3516G>A
1	EMR1	Exon5	stopgain SNV	c.430G>T
7	ENAH	Exon6	splicing	c.435-1G>C
1	ENAM	Exon9	frameshift deletion	c.2080_2084delAATCA
1	ENC1	Exon2	frameshift deletion	c.1409delA
1	ENDOD1	Exon2	stopgain SNV	c.1273C>T
1	ENDOU	Exon10	splicing	c.1115+1G>C
1	ENDOU	Exon8	frameshift insertion	c.879dupA
8	ENDOV	Exon4	splicing	c.364-2A>G
4	ENGASE	Exon4	frameshift deletion	c.513delT
3	ENGASE	Exon4	frameshift insertion	c.516_517insT
1	ENO3	Exon9	frameshift insertion	c.1065dupC
1	ENOSF1	Exon16	frameshift insertion	c.1279dupC
1	ENOSF1	Exon15	stopgain SNV	c.1195delG

1	ENOSF1	Exon13	stopgain SNV	c.990C>A
7	ENPEP	Exon6	stopgain SNV	c.1238G>A
1	ENPEP	Exon9	frameshift deletion	c.1558delT
1	ENPEP	Exon16	stopgain SNV	c.2282T>A
1	ENPP3	Exon2	stopgain SNV	c.116T>G
1	ENPP7	Exon2	splicing	c.399+2T>C
4	ENTHD1	Exon6	frameshift deletion	c.1104_1105delTC
2	ENTPD2	Exon7	splicing	c.1029+2T>C
1	ENTPD7	Exon10	frameshift deletion	c.1311delG
1	EP300	Exon13	splicing	c.2242-2_2242-1delAG
1	EP300	Exon13	splicing	c.2242-1_2242-1delG
1	EP400	Exon30	frameshift insertion	c.5924_5925insT
4	EPB41L1	Exon6	stopgain SNV	c.397C>T
1	EPB41L3	Exon22	stopgain SNV	c.3256G>T
1	EPB41L3	Exon12	frameshift deletion	c.1354delC
15	EPB41L5	Exon7	stopgain SNV	c.502C>T
1	EPG5	Exon37	stopgain SNV	c.6314G>A
1	EPG5	Exon30	frameshift deletion	c.5230delA
1	EPG5	Exon14	frameshift deletion	c.2691delA
1	EPHA10	Exon17	stopgain SNV	c.2989C>T
1	EPHA10	Exon13	splicing	c.2208+1G>A
1	EPHA1	Exon17	splicing	c.2696+2T>A
1	EPHA2	Exon13	frameshift deletion	c.2263delG
1	EPHA5	Exon2	stopgain SNV	c.224G>A
20	EPHB1	Exon3	frameshift deletion	c.614delT
1	EPHB2	Exon11	frameshift deletion	c.2090delT
1	EPHX2	Exon16	stopgain SNV	c.1399C>T
1	EPHX3	Exon7	frameshift insertion	c.807dupA
1	EPHX3	Exon4	frameshift deletion	c.439delA
2	EPN3	Exon7	frameshift deletion	c.1189_1202del AAACTCCCCAGCAC
1	EPN3	Exon9	frameshift deletion	c.1568_1575delGGAACCCC
1	EPO	Exon5	frameshift deletion	c.454_455delGG
1	EPOR	Exon3	splicing	c.251+1G>A

2	EPRS	Exon24	stopgain SNV	c.3394A>T
1	EPS8L3	Exon15	frameshift deletion	c.1263_1266delAGCC
1	EPS8L3	Exon7	splicing	c.461+1G>A
2	EPSTI1	Exon7	stopgain SNV	c.564C>G
1	EPT1	Exon4	frameshift deletion	c.261delC
1	EPX	Exon6	stopgain SNV	c.658C>T
13	EPX	Exon6	stopgain SNV	c.771C>A
2	EPX	Exon6	splicing	c.801+1G>A
1	ERAP1	Exon13	frameshift deletion	c.1861_1864delACTG
1	ERAP2	Exon9	splicing	c.1503+1G>A
1	ERBB3	Exon24	stopgain SNV	c.2843G>A
1	ERBB3	Exon28	frameshift deletion	c.4029_4305del
7	ERC1	Exon9	stopgain SNV	c.1792G>T
1	ERC2	Exon4	frameshift insertion	c.1077dupA
1	ERCC2	Exon18	frameshift deletion	c.1703_1704delTT
2	ERCC3	Exon3	stopgain SNV	c.325C>T
1	ERG	Exon11	splicing	c.892+1G>T
1	ERICH1	Exon5	frameshift deletion	c.1218delT
1	ERICH1	Exon3	frameshift insertion	c.258_259insCC
1	ERLEC1	Exon4	frameshift deletion	c.389_390delAC
1	ERMAP	Exon5	stopgain SNV	c.476_483dupCTGTGATC
1	ERMP1	Exon14	splicing	c.2386+1G>T
2	ERMP1	Exon8	frameshift insertion	c.1335dupC
1	ERMP1	Exon7	frameshift deletion	c.1297_1298delGG
1	ERN2	Exon17	splicing	c.1945-1G>A
1	ERO1LB	Exon16	frameshift insertion	c.1385dupT
1	ERV3-1	Exon2	stopgain SNV	c.1279C>T
1	ERV3-1	Exon2	frameshift deletion	c.848_849delTA
1	ERVMER34-1	Exon3	stopgain SNV	c.1637C>G
7	ESF1	Exon14	frameshift deletion	c.2519_2520delAG
2	ESR2	Exon3	splicing	c.362+2T>A
1	ESRP2	Exon10	frameshift insertion	c.1287dupC
1	ESX1	Exon4	frameshift deletion	c.1171delA

1	ESX1	Exon2	frameshift deletion	c.282_285delGGAG
1	ESYT1	Exon17	frameshift insertion	c.1863dupT
1	ESYT1	Exon29	splicing	c.3225+1G>A
1	ETNK2	Exon3	frameshift deletion	c.566_567delGC
1	ETV1	Exon7	frameshift insertion	c.360dupC
1	EVPL	Exon22	frameshift insertion	c.2963_2964insT
1	EWSR1	Exon13	frameshift deletion	c.1380_1381delTG
1	EXO1	Exon14	stopgain SNV	c.2152C>T
1	EXO1	Exon15	splicing	c.2212-1G>C
1	EXOC4	Exon13	splicing	c.1872-2A>T
1	EXOC8	Exon1	stopgain SNV	c.2042T>G
1	EXOG	Exon3	splicing	c.304-1G>A
2	EXOG	Exon5	frameshift deletion	c.608delA
1	EXOSC9	Exon7	frameshift deletion	c.656delG
2	EXTL3	Exon3	stopgain SNV	c.925A>T
1	EYA4	Exon6	stopgain SNV	c.321C>A
3	EZH2	Exon17	stopgain SNV	c.1975A>T
1	EZH2	Exon18	splicing	c.1898-1G>A
1	EZH2	Exon6	frameshift deletion	c._del
1	EZH2	Exon3	frameshift deletion	c.119delG
1	EZH2	Exon4	splicing	c.118-2_118-2delA
1	F11	Exon5	stopgain SNV	c.403G>T
1	F13A1	Exon7	splicing	c.691-1G>A
1	F2	Exon8	splicing	c.1003+2T>G
1	F2RL1	Exon1	splicing	c.82+1G>A
1	F5	Exon15	frameshift insertion	c.5037dupA
1	F7	Exon1	frameshift deletion	c.23delT
1	F7	Exon8	frameshift deletion	c.1196delT
2	FAAH2	Exon10	stopgain SNV	c.1294G>T
1	FAAH	Exon2	frameshift deletion	c.226delG
1	FABP2	Exon4	splicing	c.241-10_241-5delTATTAT
1	FABP4	Exon4	splicing	c.348+2T>C
1	FABP5	Exon3	frameshift deletion	c.255delT
1	FAHD2B	Exon8	stopgain SNV	c.913G>T

1	FAM	Exon9	frameshift deletion	c.744delG
1	FAIM2	Exon2	frameshift deletion	c.57_58delGC
1	FAIM3	Exon3	frameshift insertion	c.317_318insA
17	FAM101B	Exon2	stopgain SNV	c.253C>T
1	FAM102B	Exon11	frameshift insertion	c.1083dupG
1	FAM108A1	Exon3	frameshift deletion	c.363_364delCC
2	FAM111B	Exon4	frameshift insertion	c.816dupA
1	FAM111B	Exon4	stopgain SNV	c.1515G>A
1	FAM114A1	Exon4	frameshift deletion	c.392delG
1	FAM114A1	Exon12	stopgain SNV	c.1360delG
7	FAM115C	Exon3	frameshift deletion	c.1256_1257delCT
1	FAM117A	Exon7	frameshift deletion	c.1029delC
1	FAM118B	Exon4	frameshift deletion	c.266delA
1	FAM123B	Exon2	frameshift deletion	c.3191delC
1	FAM124A	Exon3	stopgain SNV	c.175C>T
18	FAM124B	Exon3	splicing	c.733-1G>A
1	FAM126A	Exon6	stopgain SNV	c.523C>T
5	FAM129A	Exon9	splicing	c.823-1G>C
1	FAM129A	Exon6	splicing	c.434-1G>T
1	FAM129C	Exon11	frameshift deletion	c.1359_1371del AGCACCGTTTGGC
1	FAM134A	Exon2	splicing	c.282-1_282-0insC
1	FAM134C	Exon9	frameshift insertion	c.1236_1237insT
1	FAM13A	Exon4	stopgain SNV	c.498C>A
1	FAM13A	Exon5	splicing	c.428-2A>G
2	FAM13C	Exon12	frameshift deletion	c.1013delT
1	FAM151A	Exon8	stopgain SNV	c.1693C>T
1	FAM151A	Exon8	frameshift insertion	c.1146dupG
4	FAM151A	Exon7	frameshift deletion	c.1003_1031del CCTGGGGATGACGGT CTGAATGTGGAGTG
2	FAM151A	Exon6	stopgain SNV	c.818G>A
1	FAM151A	Exon2	splicing	c.118+1G>C
1	FAM154A	Exon4	stopgain SNV	c.823C>T
1	FAM154A	Exon4	stopgain SNV	c.538A>T

1	FAM154B	Exon3	frameshift insertion	c.317dupC
6	FAM154B	Exon3	frameshift deletion	c.528_529delAC
1	FAM155A	Exon1	stopgain SNV	c.97G>T
1	FAM159A	Exon2	frameshift insertion	c.295_296insTT
1	FAM159A	Exon2	frameshift insertion	c.300_301insA
2	FAM159A	Exon2	stopgain SNV	c.313C>T
1	FAM160A2	Exon12	frameshift insertion	c.2934_2935insCA
1	FAM160A2	Exon12	frameshift deletion	c.2887delT
1	FAM160A2	Exon3	stopgain SNV	c.336G>A
1	FAM160B1	Exon9	frameshift insertion	c.1146dupT
4	FAM160B2	Exon7	frameshift insertion	c.887dupA
1	FAM161A	Exon3	stopgain SNV	c.493C>T
2	FAM161B	Exon9	frameshift deletion	c.2119delG
1	FAM162A	Exon3	splicing	c.263+1G>A
1	FAM164C	Exon2	frameshift insertion	c.46dupA
1	FAM166A	Exon7	frameshift deletion	c.886_887delCT
1	FAM166A	Exon5	stopgain SNV	c.703C>T
1	FAM168B	Exon5	stopgain SNV	c.316C>T
1	FAM171A1	Exon8	frameshift deletion	c.1090_1091delTT
1	FAM173B	Exon5	stopgain SNV	c.544C>T
1	FAM173B	Exon3	frameshift deletion	c.347delA
8	FAM174A	Exon2	stopgain SNV	c.565C>T
1	FAM175B	Exon5	frameshift insertion	c.338dupA
1	FAM177B	Exon4	stopgain SNV	c.189G>A
1	FAM178A	Exon5	stopgain SNV	c.1369C>T
1	FAM178A	Exon11	stopgain SNV	c.2543_2544insA
1	FAM179A	Exon4	frameshift deletion	c.231_240delGGACACCCCT
1	FAM179A	Exon9	stopgain SNV	c.1192G>T
1	FAM179A	Exon14	splicing	c.2012+2T>C
1	FAM179A	Exon19	stopgain SNV	c.2668C>T
9	FAM179B	Exon9	stopgain SNV	c.3410C>A

1	FAM180A	Exon3	frameshift deletion	c.249delG
2	FAM183A	Exon4	stopgain SNV	c.377G>A
16	FAM187B	Exon1	stopgain SNV	c.693G>A
1	FAM187B	Exon1	stopgain SNV	c.94C>T
1	FAM188B	Exon3	stopgain SNV	c.307A>T
2	FAM194A	Exon12	frameshift deletion	c.1371delT
1	FAM194A	Exon1	frameshift insertion	c.158_159insC
13	FAM194B	Exon3	frameshift deletion	c.404delA
1	FAM205A	Exon4	frameshift insertion	c.490dupT
1	FAM207A	Exon2	frameshift deletion	c.208delG
1	FAM208A	Exon23	frameshift deletion	c.4323delG
1	FAM208A	Exon23	frameshift deletion	c._del
2	FAM208B	Exon15	stopgain SNV	c.3941T>G
1	FAM21C	Exon3	frameshift deletion	c.267_270delCTCT
1	FAM3B	Exon7	frameshift deletion	c.582delA
1	FAM3C	Exon10	stopgain SNV	c.658G>T
1	FAM40B	Exon21	frameshift insertion	c.2455_2456dupGA
1	FAM47A	Exon1	frameshift deletion	c.375_376delAA
1	FAM47C	Exon1	stopgain SNV	c.1920C>G
1	FAM47E	Exon3	splicing	c.221+1G>A
1	FAM48B1	Exon1	frameshift insertion	c.2019_2020insAA
1	FAM48B2	Exon1	frameshift deletion	c.1376_1377delAA
1	FAM58A	Exon4	stopgain SNV	c.625C>T
1	FAM58BP	Exon1	stopgain SNV	c.22G>T
10	FAM59A	Exon6	frameshift deletion	c.2013delT
1	FAM5C	Exon3	frameshift deletion	c.409delC
1	FAM63A	Exon10	frameshift insertion	c.1436_1437insT
3	FAM63B	Exon4	frameshift deletion	c.998delT
1	FAM65B	Exon14	frameshift deletion	c.1770delT
1	FAM70B	Exon5	stopgain SNV	c.373C>T
6	FAM71A	Exon1	stopgain SNV	c.1663A>T

1	FAM71C	Exon1	frameshift insertion	c.234dupC
15	FAM71D	Exon5	frameshift insertion	c.588_589insT
1	FAM71F2	Exon3	stopgain SNV	c.384C>G
1	FAM73A	Exon8	splicing	c.896-1G>A
1	FAM73A	Exon16	stopgain SNV	c.1723A>T
1	FAM75A3	Exon4	frameshift deletion	c.2963delG
1	FAM75A3	Exon4	frameshift insertion	c.4021dupT
1	FAM75C1	Exon4	frameshift deletion	c.3402_3403delCA
1	FAM75C2	Exon4	stopgain SNV	c.3004C>T
1	FAM75C2	Exon3	splicing	c.265+1G>A
1	FAM75D1	Exon4	frameshift deletion	c.1958delC
1	FAM78A	Exon1	frameshift deletion	c.276_277delGG
1	FAM81B	Exon1	frameshift deletion	c.92delA
1	FAM81B	Exon5	stopgain SNV	c.640C>T
3	FAM81B	Exon7	frameshift insertion	c.854_855insC
1	FAM81B	Exon8	stopgain SNV	c.948G>A
3	FAM82A1	Exon2	stopgain SNV	c.46C>T
2	FAM82A1	Exon2	splicing	c.986+1G>A
1	FAM82A1	Exon5	splicing	c.1265-2A>C
1	FAM82A2	Exon8	splicing	c.911-2A>C
3	FAM83A	Exon1	stopgain SNV	c.256G>T
1	FAM83A	Exon1	frameshift deletion	c.366delC
1	FAM83D	Exon4	frameshift deletion	c.1750_1753delCTCT
2	FAM83E	Exon4	frameshift insertion	c.889dupC
1	FAM83H	Exon3	stopgain SNV	c.601C>T
1	FAM86B1	Exon7	frameshift deletion	c.801delG
1	FAM86B2	Exon8	frameshift deletion	c.903delG
1	FAM90A1	Exon4	frameshift deletion	c.61delC
2	FAM90A1	Exon4	frameshift deletion	c.10delC
1	FAM98C	Exon8	frameshift insertion	c.950dupG
2	FAM9C	Exon5	stopgain SNV	c.319C>T
1	FAN1	Exon13	stopgain SNV	c.2854C>T

1	FANCA	Exon40	splicing	c.3934+2T>C
1	FANCA	Exon4	splicing	c.190-1G>C
1	FANCD2	Exon28	splicing	c.2715+1G>A
2	FANCD2	Exon30	stopgain SNV	c.2920C>T
1	FANCD2	Exon32	frameshift deletion	c.3185_3188delATCA
18	FANCD2	Exon43	frameshift deletion	c.4240delG
3	FANCD2	Exon43	frameshift deletion	c.4251delA
1	FANCE	Exon2	frameshift deletion	c.387delA
1	FANCI	Exon23	frameshift deletion	c.2345_2346delCT
4	FANCL	Exon14	frameshift insertion	c.1096_1099dupATTA
1	FANCM	Exon22	stopgain SNV	c.5791C>T
1	FARP2	Exon2	stopgain SNV	c.61C>T
1	FARP2	Exon16	frameshift deletion	c.1720delA
1	FARSB	Exon3	stopgain SNV	c.215dupA
2	FASLG	Exon2	frameshift deletion	c.373delT
9	FASTKD1	Exon14	frameshift insertion	c.2406dupA
5	FASTKD1	Exon13	stopgain SNV	c.2303C>G
1	FASTKD3	Exon2	frameshift insertion	c.457_458insC
1	FAT3	Exon9	frameshift insertion	c.6569_6570insA
1	FAT4	Exon5	frameshift deletion	c.5941delT
1	FBF1	Exon22	frameshift deletion	c.2457_2458delGC
1	FBLIM1	Exon6	frameshift insertion	c.595_596insA
1	FBLN1	Exon10	frameshift insertion	c.1080_1081insCA
7	FBLN2	Exon2	frameshift deletion	c.939delC
1	FBLN2	Exon16	stopgain SNV	c.3163C>T
2	FBLN2	Exon17	stoploss SNV	c.3376T>C
1	FBLN7	Exon7	frameshift deletion	c.1162delG
3	FBN1	Exon35	stopgain SNV	c.4245T>A
3	FBN2	Exon66	splicing	c.8365-1G>A
5	FBP2	Exon7	stoploss SNV	c.1019A>G
1	FBXL13	Exon3	frameshift deletion	c.38delA
13	FBXL21	Exon8	frameshift deletion	c.1190_1191delCT

1	FBXO10	Exon11	frameshift deletion	c.2781delG
1	FBXO10	Exon4	frameshift deletion	c.1497_1498delTG
1	FBXO22	Exon7	stoploss SNV	c.1212A>T
1	FBXO24	Exon6	stopgain SNV	c.820delG
1	FBXO28	Exon4	stopgain SNV	c.592C>T
1	FBXO38	Exon11	frameshift deletion	c.1290delT
1	FBXO3	Exon9	stopgain SNV	c.1024G>T
1	FBXW10	Exon1	frameshift deletion	c.293_294delAG
1	FBXW10	Exon6	frameshift deletion	c.1224_1227delCTCT
1	FBXW10	Exon14	frameshift deletion	c.2898_2899delAA
2	FBXW4	Exon8	stopgain SNV	c.1023C>G
2	FBXW8	Exon8	frameshift deletion	c.1312_1313delGT
1	FCER2	Exon9	frameshift deletion	c.489_493delCCCTG
2	FCER2	Exon8	splicing	c.317-1G>C
1	FCGBP	Exon28	stopgain SNV	c.12851C>A
1	FCGBP	Exon10	frameshift deletion	c.4846_4847delGG
1	FCGBP	Exon8	splicing	c.3990+1G>A
1	FCGBP	Exon2	frameshift deletion	c.887_888delAG
4	FCGR1A	Exon3	stopgain SNV	c.274C>T
1	FCGR1B	Exon5	frameshift insertion	c.583dupG
2	FCGR1B	Exon3	frameshift deletion	c.168_169delGT
1	FCGR2C	Exon3	stoploss SNV	c.169T>C
1	FCGR3A	Exon4	frameshift deletion	c.160delG
1	FCHSD1	Exon14	frameshift deletion	c.1333_1336delGACT
1	FCHSD1	Exon11	stopgain SNV	c.1003C>T
12	FCHSD2	Exon20	stoploss SNV	c.2223A>G
1	FCHSD2	Exon11	frameshift insertion	c.1009_1010insTC
1	FCHSD2	Exon11	frameshift insertion	c.1008_1009dupAC
2	FCHSD2	Exon2	frameshift deletion	c.114delT
2	FCN2	Exon8	frameshift deletion	c.791delC
8	FCN3	Exon4	frameshift deletion	c.316delC

2	FCN3	Exon4	splicing	c.232+1G>A
1	FCRL1	Exon4	stopgain SNV	c.481C>T
1	FCRL2	Exon3	frameshift deletion	c.80_81delCT
2	FCRL3	Exon5	stopgain SNV	c.361C>T
1	FCRL5	Exon11	frameshift deletion	c.2502_2503delAC
1	FDFT1	Exon4	stopgain SNV	c.496C>T
1	FECH	Exon8	frameshift insertion	c.825_826insAA
1	FECH	Exon4	splicing	c.314+2T>C
1	FER1L5	Exon10	splicing	c.843+1G>C
11	FERMT1	Exon12	frameshift deletion	c.1577delG
4	FERMT1	Exon12	frameshift insertion	c.1574_1575insG
3	FERMT1	Exon6	frameshift deletion	c.795delT
1	FETUB	Exon1	frameshift deletion	c.188_189delGA
1	FETUB	Exon4	frameshift deletion	c.437delA
1	FETUB	Exon7	frameshift insertion	c.872dupC
1	FGD1	Exon4	frameshift insertion	c.832_833insC
1	FGD1	Exon3	frameshift insertion	c.596dupC
1	FGD1	Exon3	frameshift insertion	c.527dupC
5	FGD6	Exon2	stopgain SNV	c.2419G>T
1	FGD6	Exon2	frameshift deletion	c.2420delG
1	FGD6	Exon2	frameshift deletion	c.2416delC
3	FGF19	Exon3	stopgain SNV	c.360T>A
1	FGF6	Exon2	frameshift deletion	c.353delT
1	FGGY	Exon4	frameshift insertion	c.418dupG
2	FGGY	Exon11	splicing	c.1221+2T>C
1	FGGY	Exon15	splicing	c.1490-1G>C
1	FGL1	Exon10	splicing	c.780-1G>C
1	FHDC1	Exon9	frameshift deletion	c.1204delG
2	FH	Exon5	frameshift deletion	c.691delA
1	FHOD1	Exon13	frameshift insertion	c.1754dupC
11	FIG4	Exon16	stopgain SNV	c.1824G>A
1	FIGNL1	Exon4	frameshift deletion	c.1519_1523delTCTCA
1	FIGNL1	Exon4	frameshift	c.605_606insG

			insertion	
1	FKBP14	Exon4	stoploss SNV	c.634T>C
1	FKBP14	Exon3	frameshift insertion	c.362dupC
1	FKBP15	Exon26	frameshift deletion	c.3183delA
1	FKBP2	Exon2	frameshift deletion	c.67delA
4	FKTN	Exon5	stopgain SNV	c.351T>G
1	FKTN	Exon7	frameshift deletion	c.773_774delTT
1	FLG2	Exon3	frameshift deletion	c.6852_6855delACAG
1	FLG2	Exon3	frameshift deletion	c.5722delC
1	FLG2	Exon3	stopgain SNV	c.4687C>T
2	FLG2	Exon3	frameshift insertion	c.3939_3940dupTA
2	FLG2	Exon3	frameshift deletion	c.3101_3104delAATA
1	FLG	Exon3	stopgain SNV	c.10828C>T
1	FLG	Exon3	stopgain SNV	c.10255C>T
1	FLG	Exon3	stopgain SNV	c.9947C>G
1	FLG	Exon3	stopgain SNV	c.7661C>G
2	FLG	Exon3	stopgain SNV	c.7339C>T
9	FLG	Exon3	frameshift deletion	c.2282_2285delCAGT
8	FLG	Exon3	stopgain SNV	c.1501C>T
1	FLG	Exon3	stopgain SNV	c.1123C>T
1	FLI1	Exon10	frameshift deletion	c.1119_1122delCTCC
1	FLII	Exon30	frameshift insertion	c.3796_3800dupAAGGC
1	FLII	Exon24	stopgain SNV	c.3154C>T
1	FLNA	Exon47	frameshift insertion	c.7906dupG
1	FLNA	Exon46	frameshift deletion	c.7543delA
1	FLNA	Exon46	frameshift deletion	c.7535_7536delGT
3	FLNA	Exon9	splicing	c.1228+2T>G
2	FLNB	Exon29	frameshift deletion	c.4973delC
1	FLNC	Exon38	frameshift deletion	c.6351delG
1	FLNC	Exon38	frameshift deletion	c.6355delG
1	FLOT2	Exon6	frameshift deletion	c.508_509delAC

1	FLOT2	Exon5	frameshift deletion	c.410delT
2	FLRT2	Exon2	frameshift deletion	c.1512delA
1	FLT3LG	Exon6	frameshift insertion	c.351dupC
1	FLT3	Exon14	splicing	c.1704+1_1704+1delG
7	FMNL2	Exon21	stopgain SNV	c.2661T>G
1	FMO2	Exon6	stopgain SNV	c.745C>T
4	FMO2	Exon9	stoploss SNV	c.1414T>C
1	FMO4	Exon10	frameshift deletion	c.1495delA
1	FMO4	Exon10	frameshift deletion	c.1551delC
1	FMO5	Exon5	stopgain SNV	c.531T>G
2	FNDC3B	Exon17	frameshift deletion	c.1914delA
1	FNDC4	Exon2	frameshift insertion	c.30dupC
2	FNDC7	Exon7	stopgain SNV	c.1279G>T
1	FNDC9	Exon2	frameshift deletion	c.532delC
4	FOLR1	Exon5	splicing	c.493+2T>C
2	FOLR3	Exon5	stopgain SNV	c.595C>T
1	FOLR4	Exon2	splicing	c.139-2A>G
1	FOXB2	Exon1	frameshift deletion	c.188_198delACAACCTCTCC
1	FOXC2	Exon1	frameshift insertion	c.438dupG
1	FOXD4L5	Exon1	frameshift insertion	c.815dupT
2	FOXD4	Exon1	frameshift insertion	c.1271dupT
2	FOXD4	Exon1	frameshift insertion	c.756dupG
1	FOXRED2	Exon8	frameshift deletion	c.1721delC
1	FOXRED2	Exon5	frameshift deletion	c.1098_1099delGA
1	FRA10AC1	Exon13	splicing	c.826+1G>C
1	FRAS1	Exon10	stopgain SNV	c.988G>T
2	FRAS1	Exon65	splicing	c.10174+1G>A
1	FRAS1	Exon67	splicing	c.10540+2_10540+2delT
1	FREM1	Exon38	frameshift deletion	c.6429delA
4	FREM1	Exon16	frameshift deletion	c.2630delT
3	FRG2B	Exon4	frameshift deletion	c.480delG
9	FRG2C	Exon1	frameshift deletion	c.129_130delAG
1	FRG2C	Exon4	stopgain	c.793C>T

			SNV	
1	FRMD4A	Exon23	frameshift insertion	c.3014dupC
1	FRMD4A	Exon17	stopgain SNV	c.1281T>G
8	FRMPD2	Exon26	frameshift deletion	c.3251delA
1	FRMPD2	Exon25	frameshift deletion	c.3183delC
1	FRMPD2	Exon6	splicing	c.567+2_567+2delT
8	FRMPD4	Exon15	stopgain SNV	c.2067C>G
1	FRS3	Exon7	frameshift deletion	c.783delC
1	FRS3	Exon4	frameshift deletion	c.97delC
2	FRY	Exon9	frameshift deletion	c.899delA
1	FRY	Exon47	frameshift deletion	c.6692delT
1	FRY	Exon47	frameshift insertion	c.6698_6699insC
1	FSCB	Exon1	stopgain SNV	c.595C>T
1	FSCB	Exon1	stopgain SNV	c.220C>T
1	FSCN3	Exon5	splicing	c.1121-1G>C
1	FSD2	Exon12	stopgain SNV	c.1855C>T
1	FSIP1	Exon9	stopgain SNV	c.1032dupT
1	FSTL4	Exon9	frameshift deletion	c.1074_1075delCA
1	FST	Exon2	frameshift deletion	c.252delC
1	FTHL17	Exon1	stopgain SNV	c.442G>T
1	FTHL17	Exon1	stopgain SNV	c.358C>T
3	FTSJD2	Exon23	stopgain SNV	c.2299A>T
5	FUBP1	Exon3	splicing	c.121-1G>T
1	FUCA1	Exon9	splicing	c.1261-1G>C
1	FUS	Exon6	frameshift deletion	c.605delG
1	FUS	Exon6	frameshift deletion	c.608delG
1	FUT10	Exon4	frameshift insertion	c.811dupA
1	FUT6	Exon3	stopgain SNV	c.945C>A
1	FXC1	Exon3	stoploss SNV	c.310T>G
2	FXYD4	Exon3	splicing	c.37+2T>G
1	FYCO1	Exon8	frameshift insertion	c.934dupG
1	FYCO1	Exon8	frameshift insertion	c.931_932insG
1	FYCO1	Exon8	frameshift	c.827_828insCT

			insertion	
1	FYCO1	Exon8	frameshift insertion	c.824dupA
1	FZD1	Exon1	frameshift deletion	c.1464_1465delTG
1	FZD1	Exon1	frameshift insertion	c.1744_1745insAA
1	FZD1	Exon1	frameshift deletion	c.1842delC
1	FZD4	Exon2	frameshift insertion	c.333_334insTC
1	G0S2	Exon2	stoploss SNV	c.311A>G
3	G3BP1	Exon5	stopgain SNV	c.439G>T
1	G3BP1	Exon8	frameshift insertion	c.744_745insG
1	GAB2	Exon6	frameshift deletion	c.1535_1536delCT
1	GAB4	Exon5	splicing	c.687-2_687-1insC
1	GABBR1	Exon23	frameshift insertion	c.2838dupC
1	GABPA	Exon4	splicing	c.223-1G>C
1	GABRB1	Exon9	stopgain SNV	c.1144G>T
1	GABRB3	Exon4	stopgain SNV	c.371T>A
12	GAD1	Exon12	stopgain SNV	c.1129G>T
1	GAK	Exon6	frameshift deletion	c.634_635delGC
3	GAL3ST2	Exon1	splicing	c.29+1G>A
1	GAL3ST3	Exon3	stopgain SNV	c.304G>T
1	GAL3ST4	Exon4	stopgain SNV	c.1085_1086insA
1	GALC	Exon7	stopgain SNV	c.550A>T
1	GALNT14	Exon10	stopgain SNV	c.943C>T
1	GALNT14	Exon5	frameshift deletion	c.488delT
1	GALNT1	Exon7	frameshift deletion	c.1109delC
1	GALNT2	Exon5	frameshift insertion	c.491dupC
1	GALNT3	Exon2	frameshift deletion	c.148_149delTC
1	GALNT6	Exon5	frameshift insertion	c.785_786insA
2	GALNTL5	Exon3	splicing	c.368+1G>C
1	GALNTL5	Exon6	splicing	c.908+2T>A
1	GALT	Exon8	frameshift deletion	c.701delT
1	GANC	Exon5	stopgain SNV	c.493C>T
1	GANC	Exon8	splicing	c.626-2A>G
1	GANC	Exon11	frameshift insertion	c.1129dupG

1	GANC	Exon17	stopgain SNV	c.1999C>T
2	GAPVD1	Exon3	frameshift insertion	c.218_219insGT
4	GARNL3	Exon13	frameshift deletion	c.1029delG
8	GART	Exon18	frameshift deletion	c.2420delA
1	GAS2L2	Exon6	stopgain SNV	c.1120C>T
2	GAS2	Exon2	frameshift deletion	c.36delA
1	GATM	Exon5	stopgain SNV	c.778C>T
1	GBA2	Exon9	stopgain SNV	c.1564C>T
1	GBAS	Exon6	splicing	c.595+1G>T
1	GBE1	Exon6	splicing	c.691+2T>C
1	GBF1	Exon11	frameshift deletion	c.1158_1159delAC
1	GBF1	Exon24	frameshift insertion	c.3082_3083insT
1	GBGT1	Exon7	frameshift insertion	c.816_817insC
13	GBGT1	Exon7	stopgain SNV	c.363C>A
1	GBP3	Exon10	splicing	c.1363-1G>C
3	GBP3	Exon8	stopgain SNV	c.1360C>T
6	GBP4	Exon8	splicing	c.1197+1G>A
1	GBP4	Exon2	stopgain SNV	c.49G>T
2	GBP5	Exon8	frameshift deletion	c.1214delG
1	GBP5	Exon7	splicing	c.868+1G>A
1	GBP5	Exon5	stopgain SNV	c.622C>T
2	GBP5	Exon5	stopgain SNV	c.502_505dupGACT
1	GBP7	Exon10	frameshift insertion	c.1620dupC
1	GBP7	Exon10	stopgain SNV	c.1501G>T
1	GBP7	Exon5	frameshift deletion	c.553delC
2	GBP7	Exon4	splicing	c.191-2A>G
1	GCA	Exon6	stopgain SNV	c.556C>T
16	GCC2	Exon14	stopgain SNV	c.3676delG
2	GCKR	Exon13	frameshift insertion	c.1135dupA
1	GCKR	Exon13	stopgain SNV	c.1141C>T
1	GCKR	Exon17	frameshift deletion	c.1513_1514delAT
11	GCNT1	Exon3	stopgain SNV	c.137T>A
1	GCNT3	Exon3	stopgain	c.212C>G

			SNV	
1	GCNT3	Exon3	stopgain SNV	c.451C>T
1	GCNT3	Exon3	stopgain SNV	c.907C>T
1	GCNT4	Exon1	stopgain SNV	c.1087C>T
5	GCNT7	Exon5	stoploss SNV	c.193T>C
2	GDF3	Exon1	frameshift deletion	c.106delG
1	GDF9	Exon2	stopgain SNV	c.517A>T
1	GDPD3	Exon1	frameshift deletion	c.49delA
1	GDPD3	Exon1	frameshift insertion	c.43_44insC
1	GDPD3	Exon1	frameshift deletion	c.37_38delGG
1	GDPD3	Exon1	frameshift insertion	c.28_29insACGG
1	GDPD4	Exon14	frameshift insertion	c.1400dupT
3	GDPD4	Exon12	frameshift insertion	c.1192dupA
1	GDPD4	Exon9	frameshift deletion	c.638delA
1	GEMIN4	Exon2	stopgain SNV	c.1522C>T
1	GEMIN5	Exon26	frameshift deletion	c.3789_3790delGG
1	GEMIN5	Exon13	frameshift insertion	c.1729dupC
1	GFI1	Exon7	splicing	c.925-14_925-5delCTCTCTCTCT
6	GFI1	Exon7	splicing	c.925-10_925-5delCTCTCTCT
1	GFM1	Exon6	frameshift deletion	c.720delT
1	GFM1	Exon13	frameshift deletion	c.1596delT
1	GFM2	Exon10	frameshift deletion	c.753delT
1	GGCX	Exon15	stopgain SNV	c.2110C>T
8	GGN	Exon4	stopgain SNV	c.1939C>T
1	GGT1	Exon6	stopgain SNV	c.295C>T
1	GGT1	Exon9	splicing	c.576-2A>G
7	GGT1	Exon9	splicing	c.733+1_733+1delG
1	GGT5	Exon2	frameshift deletion	c.301delA
3	GH2	Exon4	stopgain SNV	c.642G>A
1	GH2	Exon4	frameshift deletion	c.522delA
1	GHDC	Exon9	stoploss SNV	c.1424G>T
1	GHITM	Exon9	stopgain SNV	c.994C>T

1	GHRHR	Exon7	stopgain SNV	c.728G>A
5	GHRHR	Exon13	stopgain SNV	c.1173G>A
1	GHRL	Exon3	frameshift insertion	c.198dupC
1	GHR	Exon10	frameshift deletion	c.1802_1803delTA
1	GIMAP2	Exon3	stopgain SNV	c.466delC
1	GIMAP6	Exon4	splicing	c.86-2A>G
2	GIMAP7	Exon2	frameshift deletion	c.64delA
1	GIMAP8	Exon2	frameshift deletion	c.101_102delAT
1	GIMAP8	Exon5	frameshift insertion	c.1584dupT
3	GIN53	Exon2	frameshift deletion	c.348_349delCT
4	GJA10	Exon1	stopgain SNV	c.1477C>T
6	GJA1	Exon2	frameshift deletion	c.932delC
1	GJA3	Exon2	frameshift insertion	c.357_358insA
1	GJA3	Exon2	frameshift deletion	c.355delA
3	GJA4	Exon2	stopgain SNV	c.43C>T
1	GJA8	Exon2	frameshift deletion	c.1292_1293delTA
1	GJA8	Exon2	frameshift deletion	c.1297_1298delGT
1	GJA9	Exon2	stoploss SNV	c.1548A>T
1	GJA9	Exon2	frameshift deletion	c.1149_1153delCTCTA
1	GJB2	Exon2	frameshift deletion	c.167delT
1	GJB2	Exon2	stopgain SNV	c.71G>A
3	GJB2	Exon2	frameshift deletion	c.35delG
2	GJB4	Exon2	frameshift deletion	c.153delT
2	GJB4	Exon2	stopgain SNV	c.238C>T
1	GJB4	Exon2	stopgain SNV	c.384G>A
1	GJB7	Exon3	frameshift insertion	c.644dupT
1	GJB7	Exon3	frameshift deletion	c.374_378delTTATC
1	GJB7	Exon3	frameshift deletion	c.34_38delGGAGT
1	GJD4	Exon2	frameshift deletion	c.834_835delCA
1	GKN2	Exon3	splicing	c.66+2dupT
1	GLB1L2	Exon6	stopgain SNV	c.615T>A

1	GLB1L2	Exon15	splicing	c.1507+1G>C
1	GLB1L	Exon6	stopgain SNV	c.504T>G
1	GLCE	Exon3	frameshift deletion	c.131delG
1	GLDC	Exon5	frameshift deletion	c.707delG
1	GLDC	Exon3	stopgain SNV	c.389G>A
1	GLG1	Exon6	frameshift deletion	c.1152delA
1	GLI1	Exon6	frameshift insertion	c.437dupG
1	GLI1	Exon10	frameshift insertion	c.2698_2699insA
1	GLI1	Exon10	frameshift deletion	c.2703_2704delCG
1	GLIPR1L2	Exon4	frameshift insertion	c.666_667insC
1	GLIPR1	Exon4	frameshift deletion	c._del
1	GLIPR1	Exon6	stopgain SNV	c.675G>A
1	GLO1	Exon4	frameshift deletion	c.365delC
2	GLRA3	Exon3	frameshift insertion	c.243_244insC
8	GLRA3	Exon3	frameshift deletion	c.240delC
1	GLRA4	Exon8	stopgain SNV	c.1039A>T
2	GLS2	Exon10	splicing	c.929+1G>A
3	GLT1D1	Exon8	stopgain SNV	c.760C>T
1	GLT8D1	Exon4	frameshift deletion	c.188_189delAA
1	GLT8D2	Exon6	frameshift deletion	c.313_314delGA
1	GLTSCR2	Exon3	frameshift deletion	c.312delA
1	GLUD2	Exon1	stopgain SNV	c.412C>T
1	GLUD2	Exon1	frameshift insertion	c.673_674insT
17	GLYR1	Exon13	frameshift insertion	c.1140dupG
1	GMEB2	Exon3	frameshift deletion	c.181delG
3	GMEB2	Exon3	frameshift deletion	c.175delG
1	GML	Exon3	splicing	c.181+1G>A
1	GMPR2	Exon5	frameshift deletion	c.438delG
3	GMPR	Exon8	frameshift insertion	c.854_855dupAC
2	GMPR	Exon9	frameshift insertion	c.969_972dupACTC
1	GNAI3	Exon4	frameshift insertion	c.364_365insC
1	GNAI3	Exon8	stopgain	c.892G>T

			SNV	
1	GNAI3	Exon8	frameshift deletion	c.895_896delGG
2	GNAI3	Exon8	stopgain SNV	c.906delT
1	GNAI3	Exon8	frameshift deletion	c.1010delA
3	GNAL	Exon10	frameshift deletion	c.1079_1080delTG
1	GNAT3	Exon6	frameshift deletion	c.621_624delGAGA
2	GNB1	Exon7	stopgain SNV	c.297G>A
1	GNB2	Exon5	frameshift deletion	c.207delG
1	GNB2	Exon10	frameshift insertion	c.985_986insG
1	GNB5	Exon7	stopgain SNV	c.534dupT
2	GNL1	Exon9	stopgain SNV	c.1270C>T
1	GNL1	Exon9	frameshift deletion	c.1250delT
3	GNLY	Exon1	stopgain SNV	c.11G>A
2	GNLY	Exon2	frameshift deletion	c.126delC
2	GNLY	Exon3	splicing	c.255+2T>C
1	GNPTAB	Exon19	frameshift deletion	c.3503_3504delTC
1	GNPTAB	Exon11	frameshift deletion	c.1399delG
1	GNPTG	Exon9	frameshift deletion	c.714delG
2	GNRH2	Exon4	frameshift deletion	c.337_341delGCCCC
1	GNRH2	Exon4	frameshift insertion	c.337_341dupGCCCC
1	GNS	Exon4	splicing	c.459+1G>C
2	GOLGA1	Exon3	frameshift deletion	c.12delA
1	GOLGA3	Exon16	frameshift deletion	c.3215_3216delCC
2	GOLGA3	Exon4	frameshift deletion	c.512delA
1	GOLGA6A	Exon15	stopgain SNV	c.1639C>T
2	GOLGA6B	Exon15	frameshift insertion	c.1641dupG
4	GOLGA6C	Exon18	stopgain SNV	c.2041C>T
1	GOLGA6C	Exon18	stopgain SNV	c.2044C>T
1	GOLGA8B	Exon16	stopgain SNV	c.1617T>A
1	GOLGB1	Exon14	stopgain SNV	c.7072C>T
1	GOLGB1	Exon10	stopgain SNV	c.1333C>T
1	GOLPH3L	Exon5	frameshift	c.542dupT

			insertion	
1	GON4L	Exon31	frameshift deletion	c.6537delC
2	GOT1L1	Exon9	frameshift deletion	c.1087delA
19	GOT1L1	Exon6	frameshift insertion	c.696dupT
1	GP1BA	Exon2	stopgain SNV	c.209dupA
1	GP2	Exon5	splicing	c.646+2T>A
1	GP6	Exon8	frameshift insertion	c.1752_1753insTCCC
11	GP6	Exon8	frameshift insertion	c.1206_1209dupTCTG
1	GPATCH3	Exon7	stopgain SNV	c.1421T>A
1	GPATCH3	Exon1	stopgain SNV	c.22G>T
1	GPC4	Exon9	frameshift insertion	c.1628_1629insA
4	GPC6	Exon1	stopgain SNV	c.38T>A
6	GPHN	Exon23	frameshift deletion	c.2262delG
1	GPHN	Exon23	frameshift deletion	c.2271_2272delAA
5	GPLD1	Exon25	frameshift deletion	c.2442delA
4	GPN3	Exon7	stopgain SNV	c.879T>G
1	GPNMB	Exon3	frameshift deletion	c.319_332delAAGGAAGATGCCAA
1	GPNMB	Exon3	splicing	c.367+2T>C
1	GPNMB	Exon6	splicing	c.701-2A>C
6	GPNMB	Exon11	stopgain SNV	c.1663G>T
1	GPR108	Exon13	frameshift deletion	c.1189_1190delCT
1	GPR111	Exon5	frameshift insertion	c.177_178insG
1	GPR112	Exon6	frameshift insertion	c.2463dupT
1	GPR112	Exon23	frameshift deletion	c.8862delG
1	GPR113	Exon8	stopgain SNV	c.1926C>A
2	GPR113	Exon8	stopgain SNV	c.1912C>T
1	GPR114	Exon7	frameshift insertion	c.608dupG
1	GPR115	Exon5	stopgain SNV	c.367C>T
1	GPR116	Exon21	stoploss SNV	c.4039T>A
7	GPR125	Exon10	frameshift deletion	c.1358delA
4	GPR125	Exon9	frameshift deletion	c.1148delG
2	GPR128	Exon3	frameshift deletion	c.332delA

7	GPR128	Exon11	frameshift deletion	c.1323delA
1	GPR133	Exon5	frameshift insertion	c.405dupA
1	GPR133	Exon11	frameshift insertion	c.1241_1242insCG
1	GPR135	Exon1	frameshift insertion	c.1027_1028dupTG
8	GPR142	Exon1	frameshift deletion	c.215delC
2	GPR142	Exon3	frameshift deletion	c.364delC
2	GPR149	Exon1	stopgain SNV	c.922C>T
1	GPR151	Exon1	frameshift insertion	c.949_950insG
1	GPR151	Exon1	frameshift deletion	c.663_676delTTTCTGGAGAGCTT
1	GPR151	Exon1	frameshift deletion	c.590_591delAG
3	GPR151	Exon1	stopgain SNV	c.283C>T
1	GPR155	Exon8	stopgain SNV	c.1453_1460dupATAATATC
1	GPR156	Exon9	frameshift deletion	c.2001_2005delACCAG
1	GPR172B	Exon5	frameshift deletion	c.1292delG
1	GPR173	Exon2	frameshift deletion	c.594_595delAG
1	GPR173	Exon2	frameshift deletion	c.603delT
1	GPR179	Exon3	frameshift deletion	c.984delC
1	GPR179	Exon1	stopgain SNV	c.637A>T
1	GPR17	Exon3	stopgain SNV	c.64C>T
7	GPR183	Exon2	stopgain SNV	c.114C>G
1	GPR4	Exon2	frameshift insertion	c.459_460insGTCAT
1	GPR84	Exon2	stopgain SNV	c.652C>T
1	GPR84	Exon2	frameshift deletion	c.468delG
1	GPR87	Exon3	frameshift deletion	c.182delG
2	GPR89A	Exon8	frameshift deletion	c.696_697delAA
2	GPR89B	Exon8	frameshift deletion	c.697_698delAA
1	GPR97	Exon11	frameshift deletion	c.1473delG
1	GPR98	Exon33	frameshift deletion	c.7916delG
1	GPR98	Exon44	frameshift deletion	c.9620delA
1	GPR98	Exon68	splicing	c.13893+1G>A
1	GPR98	Exon69	stopgain SNV	c.13962T>G

1	GPRASP1	Exon4	frameshift insertion	c.4008_4009insT
4	GPRC5A	Exon2	frameshift deletion	c.183delG
1	GPRC5C	Exon2	frameshift deletion	c.122_123delGC
4	GPRC5D	Exon1	frameshift deletion	c.821_837delCTTTACAAGGCAATGCC
1	GPRC5D	Exon1	frameshift deletion	c.191delT
1	GPRIN1	Exon2	frameshift insertion	c.711_712insG
1	GPRIN1	Exon2	stopgain SNV	c.610delA
1	GPSM3	Exon7	frameshift insertion	c.266dupA
2	GRAMD1A	Exon9	splicing	c.1048+1G>A
1	GRAMD1B	Exon10	frameshift deletion	c.1047delC
3	GRAMD2	Exon9	frameshift deletion	c.710_713delACAG
1	GRAMD4	Exon4	frameshift insertion	c.426_427insT
1	GRB7	Exon2	frameshift deletion	c.105delG
1	GREB1	Exon14	frameshift insertion	c.1956_1957insC
1	GRHL2	Exon15	stopgain SNV	c.1705G>T
4	GRIA1	Exon11	splicing	c.1823+2T>A
1	GRIK3	Exon13	frameshift insertion	c.1899dupG
1	GRIN2B	Exon7	stopgain SNV	c.1555C>T
1	GRIN3B	Exon3	stopgain SNV	c.1724G>A
1	GRIP1	Exon15	splicing	c.1613-2dupA
5	GRIP2	Exon21	stopgain SNV	c.2788C>T
1	GRIP2	Exon10	frameshift insertion	c.1311dupT
3	GRIP2	Exon2	frameshift deletion	c.228delA
1	GRIPAP1	Exon21	frameshift deletion	c.1883delT
1	GRM2	Exon2	frameshift deletion	c.113delT
1	GRM3	Exon3	frameshift deletion	c.1012delC
1	GRM5	Exon4	stopgain SNV	c.1003A>T
1	GRN	Exon2	frameshift deletion	c.95_96delTG
4	GRXCR2	Exon2	frameshift deletion	c.543delA
1	GSC	Exon3	stopgain SNV	c.644_645insAGTCTT
7	GSG1	Exon5	stopgain SNV	c.601C>T
1	GSG2	Exon1	frameshift	c.1348_1349delCT

			deletion	
1	GSG2	Exon1	frameshift insertion	c.2070_2071insC
1	GSS	Exon2	frameshift deletion	c.4delG
1	GSTA1	Exon5	frameshift deletion	c.331_338delGTATGTCC
1	GSTA3	Exon4	frameshift deletion	c.172_181delGTTGAGATTG
1	GSTA5	Exon4	splicing	c.139+1G>A
2	GSTM4	Exon4	splicing	c.259+1G>A
3	GSTM4	Exon7	frameshift deletion	c.534delT
1	GSTO2	Exon3	splicing	c.35-2A>G
1	GSTT2	Exon5	stopgain SNV	c.586C>T
1	GTF2B	Exon3	frameshift insertion	c.146_147insC
2	GTF2F1	Exon9	splicing	c.837-2A>G
1	GTF2H4	Exon8	frameshift deletion	c.709delC
1	GTF2H4	Exon8	frameshift insertion	c.717_718insGG
2	GTF2I	Exon16	frameshift deletion	c.1336_1339delAAGA
1	GTF2IRD2	Exon16	stopgain SNV	c.1375G>T
1	GTF3C1	Exon30	frameshift deletion	c.4438delC
1	GTF3C1	Exon20	frameshift deletion	c.3188delG
1	GTF3C1	Exon20	frameshift insertion	c.3178_3179insTT
1	GTF3C5	Exon11	frameshift insertion	c.1507_1508insTA
1	GTPBP10	Exon8	stopgain SNV	c.839T>A
1	GTPBP5	Exon4	frameshift deletion	c.368delA
1	GTPBP8	Exon2	splicing	c.467+1G>T
1	GTSE1	Exon6	splicing	c.928-1G>T
1	GTSE1	Exon8	frameshift deletion	c.1487delC
7	GUCA1C	Exon1	stopgain SNV	c.52G>T
1	GUCA2A	Exon2	stopgain SNV	c.265G>T
1	GUCY2C	Exon3	stopgain SNV	c.377dupA
1	GUCY2D	Exon12	frameshift deletion	c.2299_2300delTG
1	GUCY2D	Exon15	splicing	c.2944+1_2944+1delG
1	GUCY2F	Exon18	frameshift deletion	c.3195delC
3	GUCY2F	Exon18	frameshift deletion	c.3192delA
1	GUCY2F	Exon17	splicing	c.3055+1G>A
1	GUCY2F	Exon11	frameshift	c.2240delG

			deletion	
1	GUF1	Exon6	splicing	c.669+1dupG
1	GUF1	Exon8	splicing	c.938+1G>T
2	GUF1	Exon12	frameshift deletion	c.1402_1403delGA
1	GUSB	Exon12	stopgain SNV	c.1867C>T
1	GYG2	Exon5	splicing	c.23-2A>G
1	GYLTL1B	Exon11	stopgain SNV	c.1359G>A
1	GYLTL1B	Exon13	stopgain SNV	c.1870C>T
1	GZMA	Exon5	stopgain SNV	c.758G>A
1	GZMH	Exon5	stoploss SNV	c.740A>T
1	H2AFY2	Exon2	frameshift insertion	c.73dupG
1	H6PD	Exon4	stopgain SNV	c.793C>T
1	HAAO	Exon7	stopgain SNV	c.577G>T
1	HABP2	Exon7	stopgain SNV	c.529C>T
1	HABP2	Exon13	stopgain SNV	c.1516G>T
1	HACL1	Exon10	frameshift deletion	c.811delC
7	HADHB	Exon11	frameshift deletion	c.960delC
1	HADH	Exon2	frameshift deletion	c.142delG
1	HAO1	Exon5	stopgain SNV	c.787C>T
1	HAO2	Exon7	frameshift deletion	c.989delT
4	HAP1	Exon11	stopgain SNV	c.1847C>A
1	HAPLN4	Exon3	stopgain SNV	c.208_209insG
1	HAS2	Exon4	frameshift deletion	c.1363delA
1	HAUS1	Exon4	stopgain SNV	c.468T>A
1	HAUS3	Exon5	stopgain SNV	c.1711G>T
1	HAUS3	Exon2	frameshift deletion	c.811delT
1	HAUS4	Exon4	splicing	c.56-2A>T
1	HAVCR1	Exon3	frameshift insertion	c.147_148dupAG
1	HAVCR2	Exon5	frameshift deletion	c.572delA
1	HBB	Exon1	stopgain SNV	c.47G>A
1	HCAR3	Exon1	frameshift insertion	c.1085_1086insTCCTT
2	HCAR3	Exon1	frameshift deletion	c.1072delC

1	HCAR3	Exon1	frameshift deletion	c.1070delA
1	HCFC1	Exon24	frameshift insertion	c.5953_5954insT
1	HCN3	Exon8	frameshift deletion	c.2296delC
4	HCN4	Exon2	stopgain SNV	c.905C>G
1	HDAC1	Exon13	frameshift insertion	c.1392_1393insG
1	HDAC1	Exon13	frameshift deletion	c.1399delG
1	HDAC4	Exon11	frameshift insertion	c.1124_1125insTGTTT
14	HDGFRP3	Exon7	splicing	c.607-1G>C
3	HEATR1	Exon46	splicing	c.6347-10_6347-3delTTTTTTTT
1	HEATR1	Exon23	stopgain SNV	c.3224T>G
1	HEATR7A	Exon12	frameshift insertion	c.1116_1117insGC
4	HEATR7B2	Exon38	frameshift insertion	c.4278dupT
1	HEATR7B2	Exon20	stopgain SNV	c.2053C>T
1	HEATR7B2	Exon10	stopgain SNV	c.988C>T
1	HEATR7B2	Exon5	frameshift deletion	c.436_443delAGGATGAA
1	HEATR8	Exon24	stopgain SNV	c.3934C>T
4	HECTD1	Exon14	splicing	c.1933-12_1933-4delCTACACATT
1	HECW1	Exon29	frameshift insertion	c.4596_4597insA
3	HECW2	Exon14	stopgain SNV	c.2947A>T
1	HEG1	Exon5	frameshift deletion	c.1403delA
20	HELB	Exon4	frameshift deletion	c.1566delG
1	HELB	Exon4	frameshift deletion	c.1570delA
6	HEPACAM2	Exon7	stopgain SNV	c.1199C>A
1	HEPACAM2	Exon2	stopgain SNV	c.193C>T
1	HEPHL1	Exon1	stopgain SNV	c.13C>T
1	HEPHL1	Exon12	stopgain SNV	c.2187C>A
1	HEPHL1	Exon17	splicing	c.3045+2T>G
1	HEPHL1	Exon20	frameshift deletion	c.3340_3341delGC
2	HERC1	Exon71	frameshift insertion	c.13153dupC
3	HERC6	Exon3	stoploss SNV	c.367T>C
1	HERC6	Exon6	stoploss SNV	c.862T>C
1	HERC6	Exon16	frameshift insertion	c.2022dupA

1	HERPUD1	Exon5	frameshift deletion	c.541delT
1	HESX1	Exon3	splicing	c.357+1G>A
1	HEXA	Exon11	frameshift insertion	c.1274_1277dupTATC
1	HFM1	Exon22	splicing	c.2427+1G>T
3	HFM1	Exon11	stopgain SNV	c.1327A>T
1	HFM1	Exon9	stopgain SNV	c.1029C>A
1	HFM1	Exon7	stopgain SNV	c.808A>T
1	HFM1	Exon4	frameshift deletion	c.455delC
1	HGSNAT	Exon15	stopgain SNV	c.1516C>T
1	HHATL	Exon7	frameshift insertion	c.694_695insCA
2	HHIPL2	Exon9	frameshift insertion	c.2046dupT
1	HHIPL2	Exon6	frameshift deletion	c._del
1	HHIPL2	Exon2	frameshift insertion	c.490dupG
13	HHIP	Exon9	splicing	c.1424-1G>A
1	HHLA2	Exon4	splicing	c.418+1_418+1delG
1	HHLA2	Exon6	frameshift deletion	c.839delA
1	HHLA2	Exon6	stopgain SNV	c.870G>A
1	HIAT1	Exon6	frameshift deletion	c.496delA
1	HIBCH	Exon13	frameshift deletion	c._del
1	HIC1	Exon2	frameshift deletion	c.1793delG
1	HIGD1B	Exon3	stoploss SNV	c.298T>C
1	HINT3	Exon2	stopgain SNV	c.289A>T
1	HIP1R	Exon6	frameshift deletion	c.491_492delCA
1	HIPK1	Exon14	stopgain SNV	c.2884C>T
1	HIPK3	Exon16	frameshift deletion	c.3132delT
1	HIST1H1T	Exon1	stopgain SNV	c.502A>T
1	HIST1H1T	Exon1	frameshift deletion	c.456_457delAG
1	HIST1H2AA	Exon1	frameshift insertion	c.168dupA
1	HIST1H2AB	Exon1	frameshift deletion	c.291_292delCT
1	HIST1H2AK	Exon1	frameshift deletion	c.26delG
1	HIST1H2AL	Exon1	frameshift deletion	c.160delG
1	HIST1H2BE	Exon1	frameshift deletion	c.21delC

1	HIST1H2BE	Exon1	frameshift deletion	c.61_65delAAGGC
1	HIST1H2BG	Exon1	stopgain SNV	c.20C>G
1	HIST1H3A	Exon1	stopgain SNV	c.166C>T
3	HIST1H4B	Exon1	stopgain SNV	c.24dupT
1	HIST1H4B	Exon1	stopgain SNV	c.15_16insT
1	HIST1H4D	Exon1	frameshift deletion	c.294_295delTT
1	HIST1H4K	Exon1	frameshift insertion	c.143_144insT
1	HIST1H4L	Exon1	frameshift deletion	c.179_180delAA
1	HIST3H2BB	Exon1	frameshift insertion	c.254dupA
1	HIVEP2	Exon9	frameshift deletion	c.5736_5737delTG
1	HIVEP3	Exon7	stopgain SNV	c.6078T>A
2	HIVEP3	Exon7	stopgain SNV	c.5638G>T
1	HJURP	Exon3	splicing	c.118-2A>T
1	HK3	Exon11	stopgain SNV	c.1364T>G
1	HKDC1	Exon11	frameshift deletion	c.1604delG
1	HKDC1	Exon15	stopgain SNV	c.2163G>A
1	HKR1	Exon6	frameshift deletion	c.972_973delAG
1	HKR1	Exon6	stopgain SNV	c.1426C>T
1	HKR1	Exon6	stopgain SNV	c.1510C>T
1	HLA-A	Exon2	frameshift insertion	c.260dupA
17	HLA-B	Exon2	frameshift deletion	c.282_283delGG
17	HLA-B	Exon2	frameshift insertion	c.279_280insAA
5	HLA-B	Exon2	frameshift insertion	c.206_207insT
16	HLA-B	Exon2	frameshift insertion	c.206_207insC
13	HLA-B	Exon2	frameshift deletion	c.204delA
1	HLA-DPA1	Exon2	stopgain SNV	c.79C>T
1	HLA-DQB1	Exon2	stopgain SNV	c.316G>T
3	HLA-DQB1	Exon2	frameshift deletion	c.310delC
3	HLA-DQB1	Exon2	frameshift insertion	c.304_305insA
13	HLA-DRB1	Exon3	frameshift insertion	c.640_641insTG
2	HLA-DRB1	Exon3	frameshift insertion	c.583_584insA

3	HLA-DRB1	Exon3	frameshift deletion	c.511delA
1	HLA-DRB1	Exon3	splicing	c.370+1G>A
2	HLA-DRB1	Exon2	frameshift deletion	c.303_304delGG
9	HLA-DRB1	Exon2	frameshift deletion	c.301delC
1	HLA-DRB1	Exon2	frameshift insertion	c.299_300insAA
6	HLA-DRB1	Exon2	frameshift insertion	c.297_298insAA
1	HLA-DRB1	Exon2	frameshift insertion	c.295_296insGG
2	HLA-DRB1	Exon2	frameshift insertion	c.294_295insA
2	HLA-DRB1	Exon2	frameshift insertion	c.293dupA
3	HLA-DRB1	Exon2	frameshift insertion	c.196dupT
1	HLA-DRB1	Exon2	frameshift insertion	c.125_126insCATGA
4	HLA-DRB1	Exon2	splicing	c.100+1G>A
12	HLA-G	Exon4	frameshift deletion	c.460delC
1	HLCS	Exon5	frameshift deletion	c.768_769delGG
1	HLX	Exon4	frameshift deletion	c.1354delG
1	HMCN1	Exon31	frameshift deletion	c._del
4	HMGXB3	Exon12	frameshift deletion	c.1984delG
6	HMMR	Exon11	stopgain SNV	c.1054G>T
1	HNF1A	Exon4	frameshift insertion	c.863_864insC
1	HNF1A	Exon4	frameshift deletion	c.864delG
1	HNF1A	Exon5	frameshift deletion	c.958delG
1	HNF1A	Exon6	frameshift insertion	c.1230_1231insAC
1	HNF1A	Exon6	frameshift insertion	c.1235_1236insTC
4	HNRNPA1L2	Exon6	frameshift deletion	c.76delA
4	HNRNPA1L2	Exon6	frameshift deletion	c.830delA
1	HNRNPD	Exon8	splicing	c.854-1G>C
1	HNRPLL	Exon11	splicing	c.1416+1G>A
1	HOMER2	Exon2	stopgain SNV	c.43C>T
1	HOOK2	Exon5	frameshift deletion	c.383delA
1	HOOK3	Exon5	stopgain SNV	c.397C>T
6	HORMAD1	Exon3	stopgain SNV	c.148G>T
1	HORMAD2	Exon10	splicing	c.569-1G>T

1	HOXA10	Exon3	splicing	c.959-2_959-1insAG
1	HOXA11	Exon2	frameshift deletion	c.912delA
1	HOXA11	Exon1	frameshift deletion	c.140delA
1	HOXA1	Exon2	frameshift deletion	c.972delG
1	HOXA1	Exon1	frameshift deletion	c.14delG
2	HOXA6	Exon2	frameshift deletion	c.545_548delGGCG
3	HOXA6	Exon2	frameshift deletion	c.540_541delGA
3	HOXA6	Exon2	frameshift deletion	c.503delT
1	HOXA6	Exon2	frameshift deletion	c.497delA
1	HPGD	Exon3	frameshift deletion	c.310_311delCT
1	HPS4	Exon14	frameshift deletion	c.2043delC
1	HPSE2	Exon9	frameshift deletion	c.1291_1292delAA
1	HPSE	Exon13	stopgain SNV	c.1480C>T
2	HPSE	Exon4	stopgain SNV	c.388G>T
1	HRASLS	Exon4	stopgain SNV	c.412C>T
3	HRNR	Exon3	stopgain SNV	c.3232C>T
1	HRNR	Exon3	stopgain SNV	c.2338C>T
1	HS6ST1	Exon1	stopgain SNV	c.199A>T
1	HS6ST2	Exon2	frameshift deletion	c.407delA
3	HS6ST2	Exon2	frameshift insertion	c.318dupC
1	HSD11B2	Exon5	frameshift insertion	c.818dupT
1	HSD17B13	Exon4	stopgain SNV	c.494C>G
8	HSD17B13	Exon4	frameshift deletion	c.465delC
1	HSD17B13	Exon1	frameshift insertion	c.144_145insTCCA
2	HSD17B14	Exon7	frameshift deletion	c.493delA
1	HSD17B14	Exon6	splicing	c.369+1G>T
1	HSD17B14	Exon4	stopgain SNV	c.235C>T
3	HSD17B2	Exon5	stoploss SNV	c.1163A>G
2	HSD17B4	Exon7	frameshift insertion	c.436_437insAC
1	HSD17B4	Exon15	frameshift deletion	c.1372_1373delGA
1	HSF2	Exon9	frameshift deletion	c.858delC

1	HSF4	Exon12	frameshift insertion	c.1038_1039insA
2	HSH2D	Exon4	frameshift deletion	c.66_67delGA
1	HSH2D	Exon8	stopgain SNV	c.880C>T
1	HSP90B1	Exon5	splicing	c.743+1G>A
1	HSPA13	Exon3	frameshift deletion	c.548_549delGA
5	HSPA6	Exon1	stopgain SNV	c.1309C>T
1	HSPA9	Exon7	frameshift deletion	c.626delG
1	HSPG2	Exon55	frameshift deletion	c.7018_7019delAC
1	HSPG2	Exon40	splicing	
1	HSPG2	Exon39	frameshift deletion	c.4947_4948delCT
1	HSPG2	Exon24	frameshift insertion	c.3138dupG
1	HSPG2	Exon24	frameshift insertion	c.3132_3133insT
3	HTN3	Exon5	stopgain SNV	c.141T>A
1	HTR1A	Exon1	frameshift insertion	c.272_273insA
1	HTR1E	Exon2	frameshift insertion	c.239dupT
1	HTR3A	Exon3	splicing	c.282+2T>G
1	HTR3E	Exon3	stopgain SNV	c.350G>A
1	HTRA4	Exon5	splicing	c.999+2T>G
1	HYDIN	Exon54	splicing	c.8847-1G>T
1	HYDIN	Exon41	frameshift insertion	c.6341_6342dupTC
1	HYDIN	Exon35	frameshift deletion	c.5310delC
1	HYDIN	Exon21	stopgain SNV	c.3175C>T
4	HYDIN	Exon9	stopgain SNV	c.1095dupT
5	IBSP	Exon7	frameshift deletion	c.696delT
1	ICK	Exon15	stopgain SNV	c.1783C>T
1	IDH3A	Exon2	splicing	c.90+1G>A
1	IDH3G	Exon7	frameshift deletion	c.460delG
11	IDI2	Exon5	stoploss SNV	c.684A>T
1	IDI2	Exon4	frameshift deletion	c.286delC
1	IFI27L1	Exon3	splicing	c.61+1G>A
1	IFI35	Exon5	frameshift deletion	c.537delG
3	IFI44L	Exon5	stopgain SNV	c.873T>A
1	IFI44	Exon4	stopgain SNV	c.540T>A

4	IFIH1	Exon15	splicing	c.2807+1G>A
3	IFIH1	Exon10	stopgain SNV	c.1879G>T
1	IFIH1	Exon9	frameshift insertion	c.1764dupA
7	IFIH1	Exon9	splicing	c.1641+1G>C
1	IFIH1	Exon5	stopgain SNV	c.949C>T
1	IFIT1	Exon2	stopgain SNV	c.784C>T
1	IFIT3	Exon2	frameshift insertion	c.36_37insTG
1	IFIT3	Exon2	frameshift deletion	c.45_48delGCTG
1	IFIT3	Exon2	stopgain SNV	c.364C>T
1	IFLTD1	Exon3	stopgain SNV	c.382C>T
1	IFNA10	Exon1	stopgain SNV	c.373C>T
1	IFNA10	Exon1	frameshift deletion	c.9_13delGTCCT
3	IFNA5	Exon1	stopgain SNV	c.343C>T
1	IFNA5	Exon1	stopgain SNV	c.127C>T
1	IFNA6	Exon1	stopgain SNV	c.253C>T
1	IFNAR1	Exon9	frameshift insertion	c.1263dupT
1	IFNB1	Exon1	stopgain SNV	c.556C>T
5	IFNE	Exon1	stopgain SNV	c.211C>T
19	IFNK	Exon1	frameshift insertion	c.31_34dupTGTT
1	IFNW1	Exon1	frameshift deletion	c.229delA
1	IFT122	Exon17	stopgain SNV	c.2208G>A
1	IFT122	Exon17	frameshift insertion	c.2210_2211insGG
1	IFT140	Exon31	frameshift deletion	c.4328delG
1	IFT172	Exon10	splicing	c.786-2A>T
1	IFT172	Exon10	splicing	c.786-2A>G
1	IFT43	Exon4	splicing	c.310+2T>C
3	IFT74	Exon2	splicing	c.120+2dupT
1	IFT80	Exon4	frameshift deletion	c.301delA
1	IGDCC3	Exon14	frameshift deletion	c.2270delG
1	IGDCC3	Exon14	frameshift deletion	c.2264_2265delAG
1	IGDCC4	Exon8	stopgain SNV	c.1528G>T
1	IGDCC4	Exon8	frameshift deletion	c.1525delC
3	IGDCC4	Exon8	stopgain	c.1518C>A

			SNV	
3	IGF2BP2	Exon16	stoploss SNV	c.1800delA
1	IGFBP1	Exon4	frameshift deletion	c.740delG
1	IGFBPL1	Exon4	frameshift deletion	c.824_830delATGACCG
1	IGFBPL1	Exon4	frameshift insertion	c.818_819insA
4	IGFLR1	Exon5	frameshift deletion	c.748_749delCT
1	IGHMBP2	Exon8	frameshift insertion	c.1079_1080insG
2	IGHMBP2	Exon13	frameshift deletion	c.1814delG
2	IGLL1	Exon2	frameshift deletion	c.258delG
2	IGSF10	Exon6	frameshift insertion	c.7350_7353dupATCA
3	IGSF10	Exon4	stopgain SNV	c.4804G>T
1	IGSF10	Exon4	frameshift deletion	c.3834_3835delCA
1	IGSF10	Exon4	frameshift deletion	c.1782delA
1	IGSF1	Exon4	frameshift deletion	c.212_213delTG
1	IGSF22	Exon8	splicing	c.696+1G>A
1	IGSF22	Exon7	stopgain SNV	c.694G>T
2	IGSF22	Exon7	splicing	c.479-2A>T
1	IGSF22	Exon4	splicing	c.110-2_110-2delA
4	IGSF3	Exon9	frameshift deletion	c.2464delG
1	IGSF3	Exon7	frameshift insertion	c.1585_1586insC
1	IKBKAP	Exon34	stopgain SNV	c.3595A>T
2	IKBKAP	Exon19	frameshift insertion	c.2032_2033insT
3	IKBKAP	Exon19	frameshift deletion	c.2018delT
1	IKBKE	Exon18	splicing	c.1835+1G>T
4	IKZF2	Exon6	stopgain SNV	c.391A>T
2	IKZF4	Exon4	frameshift deletion	c.468delT
1	IL12B	Exon4	frameshift deletion	c.452_453delAT
1	IL12RB1	Exon14	stopgain SNV	c.1624C>T
2	IL17RB	Exon4	splicing	c.354+2_354+5delTAAG
1	IL17RB	Exon11	frameshift deletion	c.1153delC
1	IL18RAP	Exon3	frameshift deletion	c.67delT
1	IL18RAP	Exon4	frameshift deletion	c.167delT
1	IL19	Exon5	splicing	c.478-1G>A

5	IL1R1	Exon5	frameshift deletion	c.645delT
2	IL20	Exon1	frameshift deletion	c.19delG
1	IL20	Exon1	frameshift deletion	c.36delT
1	IL20	Exon2	splicing	c.225+1G>T
1	IL21R	Exon9	frameshift deletion	c.1311_1312delGC
1	IL23R	Exon3	frameshift deletion	c.210delC
1	IL28A	Exon6	stopgain SNV	c.562C>T
1	IL4R	Exon4	frameshift deletion	c.203delT
1	IL6ST	Exon10	frameshift deletion	c.1089_1090delCT
4	IL8	Exon2	stopgain SNV	c.91G>T
1	IL9	Exon5	frameshift deletion	c.384delT
1	ILVBL	Exon14	stopgain SNV	c.1548G>A
1	IMMT	Exon13	stopgain SNV	c.1453C>T
1	IMP3	Exon1	stoploss SNV	c.554A>G
1	IMP5	Exon1	stopgain SNV	c.102G>A
5	IMPA1	Exon4	splicing	c.154-1G>C
6	IMPA2	Exon7	stopgain SNV	c.687C>A
1	INADL	Exon8	frameshift deletion	c.1010delC
1	INADL	Exon14	stopgain SNV	c.1677T>A
1	INCA1	Exon8	frameshift deletion	c.416delG
5	INCA1	Exon5	stopgain SNV	c.64C>T
1	INCENP	Exon10	frameshift insertion	c.1584_1585insA
1	INCENP	Exon17	frameshift deletion	c.2324delA
1	INCENP	Exon17	frameshift insertion	c.2329dupG
1	INHBC	Exon2	frameshift deletion	c.769delC
2	INHBC	Exon2	frameshift deletion	c.853delG
1	INMT	Exon2	stopgain SNV	c.318delG
1	INMT	Exon3	stopgain SNV	c.364C>T
16	INMT	Exon3	stoploss SNV	c.788G>C
3	INPP1	Exon5	splicing	c.266-2_266-2delA
1	INPP4B	Exon22	stopgain SNV	c.2023G>T
1	INPP5D	Exon20	stopgain	c.2410C>T

			SNV	
1	INPP5J	Exon3	splicing	c.168-2A>C
1	INPP5J	Exon6	stopgain SNV	c.622C>T
1	INPP5K	Exon3	frameshift deletion	c.228delC
1	INPPL1	Exon26	frameshift deletion	c.3011_3012delCT
4	INSC	Exon3	stopgain SNV	c.364C>T
1	INSC	Exon6	frameshift deletion	c.821delG
1	INSR	Exon14	frameshift insertion	c.2736_2737insA
1	INSRR	Exon17	stopgain SNV	c.2995C>T
1	INSRR	Exon9	frameshift deletion	c.1888delC
1	INSRR	Exon6	frameshift deletion	c.1232_1233delAC
1	INSRR	Exon4	splicing	c.941+1G>T
1	INTS1	Exon3	frameshift deletion	c.144delA
7	INTS3	Exon27	stopgain SNV	c.2740A>T
1	INTU	Exon2	frameshift deletion	c.310delA
1	IP6K2	Exon3	stopgain SNV	c.393G>A
1	IPO11	Exon11	splicing	c.1174+2T>G
1	IPO13	Exon19	frameshift insertion	c.2738_2739insCAGTA
1	IPO13	Exon19	frameshift deletion	c.2738delT
2	IPO5	Exon6	stopgain SNV	c.397G>T
3	IPO5	Exon24	splicing	c.2547+2T>C
3	IPO7	Exon3	frameshift deletion	c.224delC
1	IPO8	Exon13	stopgain SNV	c.1397T>G
1	IQCA1	Exon2	frameshift deletion	c.323delT
1	IQCE	Exon2	splicing	c.82+1G>A
2	IQCE	Exon11	frameshift deletion	c.847_856delCGGAGTGTCC
1	IQCE	Exon13	frameshift insertion	c.1175_1176insT
1	IQCE	Exon13	frameshift insertion	c.1181dupA
1	IQCF1	Exon4	stoploss SNV	c.616T>C
1	IQCF1	Exon4	stopgain SNV	c.295C>T
1	IQCF3	Exon7	stopgain SNV	c.200G>A
8	IQCF3	Exon7	stopgain SNV	c.217A>T
1	IQCG	Exon7	stopgain	c.655G>T

			SNV	
2	IQCH	Exon15	stopgain SNV	c.2200C>T
2	IQGAP1	Exon21	frameshift deletion	c.2481delT
10	IQGAP1	Exon31	frameshift deletion	c.3948delT
1	IQGAP2	Exon23	stopgain SNV	c.2788C>T
2	IQGAP3	Exon15	splicing	c.1570+1G>A
1	IQGAP3	Exon11	frameshift deletion	c.1097delC
3	IRAK3	Exon2	splicing	c.198+1G>T
1	IRAK4	Exon6	stopgain SNV	c.505C>T
3	IRS1	Exon1	frameshift insertion	c.1791dupG
1	IRS2	Exon1	stopgain SNV	c.388C>T
1	IRS4	Exon1	frameshift insertion	c.1772dupG
1	IRX1	Exon2	frameshift deletion	c.403delA
1	IRX1	Exon2	frameshift deletion	c.588delC
1	IRX3	Exon2	frameshift insertion	c.706dupG
1	IRX4	Exon5	frameshift deletion	c.758delA
1	ISCU	Exon3	frameshift deletion	c.278delT
2	ISM2	Exon5	stopgain SNV	c.978T>G
1	ISX	Exon2	splicing	c.381+1G>A
1	ISYNA1	Exon11	stopgain SNV	c.1623C>A
1	ITGA10	Exon9	stopgain SNV	c.994C>T
1	ITGA10	Exon12	frameshift deletion	c.1377_1378delAA
1	ITGA1	Exon11	frameshift insertion	c.1215_1219dupTGTC
1	ITGA2B	Exon24	frameshift insertion	c.2375_2376insCT
2	ITGA2	Exon3	splicing	c.295+1G>C
1	ITGA4	Exon24	frameshift deletion	c.2577_2580delAGTG
8	ITGA5	Exon28	stopgain SNV	c.2920C>T
1	ITGA6	Exon23	stopgain SNV	c.2926C>T
1	ITGAD	Exon8	stopgain SNV	c.736C>T
2	ITGAE	Exon7	splicing	c.434-2_434-1insTTA
3	ITGAL	Exon27	splicing	c.2976+2T>A
1	ITGAV	Exon15	stopgain SNV	c.1507C>T
1	ITGAV	Exon18	stopgain SNV	c.1930C>T

1	ITGB1BP2	Exon11	stopgain SNV	c.986C>G
1	ITGB3BP	Exon7	frameshift deletion	c.454_457delTTTG
2	ITGB3	Exon10	frameshift insertion	c.1476dupG
1	ITGB6	Exon14	stopgain SNV	c.2245C>T
1	ITGB6	Exon11	frameshift deletion	c.1792delG
1	ITGB6	Exon12	splicing	c.1661-2A>G
1	ITGB6	Exon2	stopgain SNV	c.129G>A
1	ITGB7	Exon12	frameshift insertion	c.1654_1655insA
1	ITGB8	Exon1	stopgain SNV	c.49C>T
1	ITIH1	Exon2	stopgain SNV	c.121C>T
1	ITIH1	Exon3	frameshift deletion	c.300_301delTT
1	ITIH1	Exon20	stopgain SNV	c.2408G>A
1	ITIH2	Exon4	splicing	c.362+1G>C
1	ITIH6	Exon11	splicing	c.3238+2T>C
13	ITIH6	Exon8	splicing	c.1075+2dupT
1	ITIH6	Exon7	frameshift deletion	c.1026delG
1	ITM2A	Exon5	frameshift deletion	c.558delC
2	ITPKC	Exon3	splicing	c.1469+2T>G
1	ITPR3	Exon25	frameshift insertion	c.3178_3179insAT
1	ITPR3	Exon26	splicing	c.3283-1G>A
1	ITPRIPL1	Exon3	stopgain SNV	c.190C>T
1	ITPRIPL1	Exon3	stopgain SNV	c.1437G>A
8	ITSN1	Exon29	frameshift deletion	c.3514delG
4	ITSN2	Exon20	splicing	c.2257+1G>A
1	JAKMIP1	Exon12	stopgain SNV	c.1651A>T
1	JAKMIP3	Exon15	frameshift deletion	c.1950_1951delCA
1	JAKMIP3	Exon15	frameshift deletion	c.1955delT
1	JMJD4	Exon6	splicing	c.1107+1_1107+2insA
5	JUP	Exon8	frameshift deletion	c.1494delC
1	KAAG1	Exon1	stopgain SNV	c.28G>T
1	KAL1	Exon8	stopgain SNV	c.1207A>T
1	KANK1	Exon3	stopgain SNV	c.972T>A
1	KANK2	Exon11	frameshift deletion	c.2380delG

5	KANK4	Exon6	splicing	c.2231+1_2231+1delG
1	KAT2A	Exon11	frameshift deletion	c.1665_1666delGG
2	KAT6A	Exon18	stopgain SNV	c.5263A>T
1	KAT7	Exon2	frameshift deletion	c.123delA
1	KAT7	Exon12	stopgain SNV	c.1450C>T
1	KATNA1	Exon8	stoploss SNV	c.935G>T
1	KATNAL2	Exon9	stopgain SNV	c.645G>A
1	KAZN	Exon2	stopgain SNV	c.367C>T
1	KBTBD12	Exon3	stopgain SNV	c.1369C>T
1	KBTBD12	Exon4	frameshift deletion	c.1587_1590delGGGC
1	KBTBD3	Exon4	frameshift deletion	c.1065delT
1	KBTBD7	Exon1	frameshift deletion	c.486_487delCT
1	KBTBD7	Exon1	frameshift deletion	c.475_476delGC
2	KCMF1	Exon7	frameshift deletion	c.1002delA
1	KCNA1	Exon2	frameshift deletion	c.1129_1130delGA
1	KCNA1	Exon2	frameshift deletion	c.1135delT
1	KCNA3	Exon1	frameshift deletion	c.1495delT
1	KCNA6	Exon1	frameshift deletion	c.1422delA
1	KCNAB3	Exon12	splicing	c.927+1G>T
1	KCNAB3	Exon7	stopgain SNV	c.508C>T
1	KCND1	Exon4	frameshift insertion	c.1370dupA
3	KCND2	Exon5	stopgain SNV	c.1513G>T
6	KCNE1L	Exon1	stopgain SNV	c.163A>T
1	KCNE2	Exon2	frameshift deletion	c.369_370delCT
1	KCNH1	Exon2	splicing	c.79+0_79+3dupGGTA
1	KCNH3	Exon12	frameshift deletion	c.2358delC
1	KCNH3	Exon12	frameshift insertion	c.2367_2368insA
1	KCNIP2	Exon3	stopgain SNV	c.265G>T
1	KCNJ11	Exon2	frameshift deletion	c.80delT
1	KCNJ15	Exon4	frameshift deletion	c.168delC
1	KCNJ15	Exon4	stopgain SNV	c.889C>T
1	KCNJ18	Exon3	frameshift	c.719_720insT

			insertion	
3	KCNK16	Exon5	stopgain SNV	c.751C>T
1	KCNK16	Exon2	frameshift deletion	c.254_255delGC
1	KCNK18	Exon3	frameshift deletion	c.414_415delCT
2	KCNK1	Exon1	stopgain SNV	c.160C>T
1	KCNK4	Exon5	splicing	c.475-1G>A
2	KCNK4	Exon5	splicing	c.475-1_475-1delG
1	KCNK5	Exon5	frameshift insertion	c.746_747insGC
2	KCNMA1	Exon20	frameshift deletion	c.2144delA
1	KCNMB1	Exon4	frameshift deletion	c.357delC
1	KCNQ4	Exon13	frameshift deletion	c.1813delT
2	KCNQ5	Exon14	stopgain SNV	c.2513C>A
2	KCNRG	Exon1	frameshift deletion	c.300delA
1	KCNT1	Exon25	frameshift deletion	c.2896delG
7	KCNT2	Exon22	stopgain SNV	c.2582C>G
1	KCNU1	Exon27	frameshift deletion	c.3392_3396delGGAAA
1	KCTD11	Exon1	frameshift deletion	c.85delG
1	KCTD12	Exon1	stoploss SNV	c.976T>A
1	KCTD17	Exon8	splicing	c.825-1G>T
8	KCTD18	Exon7	frameshift deletion	c.1159_1166delACCGCGCC
1	KDELC1	Exon3	frameshift deletion	c.421_422delCT
1	KDELR3	Exon4	frameshift deletion	c.371_374delTCTA
2	KDM1B	Exon10	stopgain SNV	c.788T>G
2	KDM2B	Exon1	frameshift deletion	c.83_84delCA
2	KDM3A	Exon22	stopgain SNV	c.3400G>T
1	KDM3A	Exon22	frameshift deletion	c.3411delA
1	KDM3B	Exon8	frameshift deletion	c.1690_1691delCC
2	KDM5C	Exon24	stopgain SNV	c.4107G>A
1	KDM5C	Exon21	frameshift insertion	c.3699_3700insCC
1	KDM5C	Exon13	frameshift deletion	c.2010delC
5	KDM6A	Exon9	frameshift deletion	c.690delA
1	KEAP1	Exon2	frameshift insertion	c.242dupT

1	KEL	Exon3	frameshift insertion	c.184dupT
1	KHDC1	Exon5	frameshift deletion	c.526_527delCT
1	KHDC1	Exon5	frameshift insertion	c.514_515insA
1	KIAA0020	Exon8	splicing	c.677+1G>A
1	KIAA0090	Exon23	splicing	c.2802+1_2802+1delG
1	KIAA0146	Exon13	frameshift deletion	c.1780delA
1	KIAA0182	Exon15	stopgain SNV	c.3308G>A
1	KIAA0195	Exon20	frameshift deletion	c.2618delC
1	KIAA0195	Exon20	frameshift deletion	c.2652delT
1	KIAA0195	Exon28	frameshift deletion	c.3577delA
1	KIAA0195	Exon28	frameshift deletion	c.3584delG
1	KIAA0196	Exon13	stopgain SNV	c.1582C>T
1	KIAA0319	Exon4	frameshift deletion	c.266delC
1	KIAA0368	Exon1	frameshift deletion	c.27_28delGA
1	KIAA0408	Exon6	stopgain SNV	c.2062C>T
1	KIAA0408	Exon6	frameshift deletion	c.1982delT
1	KIAA0415	Exon11	splicing	c.1312-2A>G
1	KIAA0430	Exon11	frameshift deletion	c.2433delG
12	KIAA0513	Exon2	stopgain SNV	c.325G>T
1	KIAA0528	Exon23	splicing	c.2447-2A>G
16	KIAA0528	Exon14	stopgain SNV	c.1564A>T
1	KIAA0556	Exon15	frameshift deletion	c.2373delC
1	KIAA0564	Exon41	frameshift deletion	c.5096delG
1	KIAA0564	Exon36	stopgain SNV	c.4408A>T
1	KIAA0564	Exon20	stopgain SNV	c.2333T>G
1	KIAA0564	Exon18	frameshift deletion	c.2132_2135delCTGA
1	KIAA0564	Exon17	splicing	c.1870-1G>C
4	KIAA0586	Exon5	frameshift deletion	c.428delG
1	KIAA0586	Exon12	splicing	c.1413-1G>C
1	KIAA0664	Exon26	frameshift deletion	c.3875delA
1	KIAA0753	Exon18	stopgain SNV	c.2686C>T
1	KIAA0753	Exon10	frameshift deletion	c.1784_1785delAA
1	KIAA0753	Exon7	stopgain	c.1109T>A

			SNV	
5	KIAA0895	Exon7	frameshift deletion	c.1472_1473delTC
1	KIAA0907	Exon10	frameshift insertion	c.1254_1255insG
2	KIAA0907	Exon10	frameshift deletion	c.1253_1254delCT
6	KIAA0913	Exon24	frameshift insertion	c.5100dupC
1	KIAA0922	Exon24	splicing	c.2789+2T>C
1	KIAA1199	Exon24	frameshift insertion	c.3239dupT
1	KIAA1211	Exon8	frameshift deletion	c.924delT
1	KIAA1211	Exon10	frameshift deletion	c.3468delC
7	KIAA1239	Exon2	stopgain SNV	c.169C>T
1	KIAA1257	Exon7	frameshift deletion	c.914delC
1	KIAA1257	Exon4	frameshift deletion	c.509_510delTT
1	KIAA1279	Exon3	stopgain SNV	c.599C>A
1	KIAA1324L	Exon3	frameshift deletion	c.409delG
1	KIAA1324L	Exon3	frameshift deletion	c.398delG
2	KIAA1370	Exon13	frameshift deletion	c.3114delT
20	KIAA1407	Exon9	frameshift deletion	c.1245delC
1	KIAA1429	Exon21	stopgain SNV	c.4715C>G
2	KIAA1429	Exon12	splicing	c.2669-1G>A
1	KIAA1530	Exon9	frameshift deletion	c.1405delG
1	KIAA1549	Exon13	frameshift insertion	c.4480_4481insG
1	KIAA1549	Exon2	frameshift deletion	c.2660delG
1	KIAA1586	Exon4	frameshift insertion	c.391_392insCC
1	KIAA1586	Exon4	frameshift deletion	c.2090_2093delTTAG
1	KIAA1609	Exon4	splicing	c.154-1G>T
1	KIAA1614	Exon5	frameshift insertion	c.2703_2704insCA
1	KIAA1614	Exon5	frameshift deletion	c.2709delG
1	KIAA1731	Exon24	frameshift deletion	c.7051delT
1	KIAA1755	Exon11	splicing	c.2417+1G>T
13	KIAA1755	Exon3	stopgain SNV	c.1528C>T
1	KIAA1797	Exon42	splicing	c.4729-1G>T
1	KIAA1841	Exon6	stopgain SNV	c.561G>A
1	KIAA1841	Exon21	frameshift	c.2082delT

			deletion	
4	KIAA1958	Exon2	frameshift deletion	c.111delT
1	KIAA2018	Exon7	frameshift deletion	c.3396delA
1	KIAA2018	Exon7	frameshift deletion	c.3047delA
1	KIF12	Exon16	stopgain SNV	c.1471C>T
1	KIF15	Exon33	stopgain SNV	c.3940G>T
1	KIF18A	Exon14	stopgain SNV	c.2130delT
1	KIF18B	Exon14	splicing	c.2285+2T>A
1	KIF1A	Exon36	frameshift deletion	c.3604_3605delAT
1	KIF1A	Exon36	frameshift deletion	c.3599delG
2	KIF1B	Exon38	stopgain SNV	c.4151C>G
1	KIF20A	Exon7	frameshift insertion	c.706dupG
1	KIF20B	Exon15	frameshift deletion	c.1992delT
1	KIF20B	Exon20	frameshift deletion	c.3533_3534delTT
1	KIF20B	Exon33	stopgain SNV	c.5314C>T
3	KIF24	Exon11	stopgain SNV	c.3554G>A
1	KIF24	Exon11	splicing	c.1625+1G>A
1	KIF24	Exon8	frameshift deletion	c.1401_1404delGACA
1	KIF26B	Exon3	frameshift insertion	c.509_510dupCC
1	KIF26B	Exon3	frameshift insertion	c.627_628insA
1	KIF26B	Exon3	frameshift insertion	c.859_860insT
1	KIF26B	Exon12	frameshift insertion	c.3148dupC
1	KIF3A	Exon17	stopgain SNV	c.2090T>G
2	KIF4A	Exon20	splicing	c.2119-1G>T
1	KIF4B	Exon1	frameshift insertion	c.1581dupT
4	KIF5A	Exon24	frameshift deletion	c.2549delA
7	KIF5C	Exon19	splicing	c.2240+2T>A
7	KIF6	Exon11	splicing	c.1181+2_1181+2delT
1	KIF6	Exon8	frameshift insertion	c.951_952insGC
1	KIF7	Exon17	stopgain SNV	c.3379C>T
1	KIFC3	Exon8	frameshift insertion	c.1064dupA
2	KIR2DL1	Exon4	stopgain SNV	c.621C>G
1	KIR2DL1	Exon6	frameshift	c.809delA

			deletion	
7	KIR2DL1	Exon6	frameshift insertion	c.817dupA
10	KIR2DL4	Exon6	frameshift insertion	c.810dupA
1	KIR2DS4	Exon3	splicing	c.71-2A>G
14	KIR2DS4	Exon7	frameshift deletion	c.838_839delCA
1	KIR3DL1	Exon3	stopgain SNV	c.121C>T
1	KIR3DL1	Exon9	stopgain SNV	c.1283dupA
1	KIR3DL2	Exon3	frameshift deletion	c.320_321delCG
1	KIRREL2	Exon15	stopgain SNV	c.1721G>A
1	KIRREL3	Exon17	frameshift deletion	c.2273delA
2	KIT	Exon1	frameshift deletion	c.3delG
1	KLHDC1	Exon3	stopgain SNV	c.246C>A
1	KLHDC4	Exon7	stopgain SNV	c.751C>T
3	KLHDC7A	Exon1	stopgain SNV	c.754C>T
1	KLHDC8B	Exon4	frameshift insertion	c.552_553insA
1	KLHL13	Exon3	frameshift deletion	c.65delA
1	KLHL1	Exon1	frameshift deletion	c.134delG
1	KLHL25	Exon2	frameshift deletion	c.1610delG
5	KLHL29	Exon12	frameshift insertion	c.2146dupT
2	KLHL32	Exon6	splicing	c.412-2A>C
2	KLHL32	Exon6	stopgain SNV	c.561T>G
1	KLHL38	Exon1	frameshift insertion	c.582_583insG
1	KLHL38	Exon1	frameshift deletion	c.578_579delAG
2	KLK14	Exon3	splicing	c.26+1G>A
1	KLK3	Exon5	stoploss SNV	c.786A>C
2	KLK4	Exon5	stoploss SNV	c.764A>C
1	KLK4	Exon2	stopgain SNV	c.190C>T
1	KLK7	Exon6	frameshift deletion	c.634delA
2	KLKB1	Exon5	frameshift insertion	c.451dupT
3	KLRC2	Exon6	frameshift deletion	c.676delC
1	KLRC3	Exon7	splicing	c.588-2A>G
2	KLRC3	Exon6	splicing	c.587+1G>T
1	KLRC4-KLRK1	Exon11	splicing	c.242-2A>G

1	KLRK1	Exon8	frameshift deletion	c.642delG
1	KNG1	Exon7	splicing	c.823-2A>G
1	KNTC1	Exon7	frameshift insertion	c.547dupA
1	KNTC1	Exon16	frameshift deletion	c.1234delG
1	KPNA1	Exon10	frameshift deletion	c.975_976delAG
1	KPNA4	Exon4	splicing	c.115-1G>A
1	KPNA5	Exon6	stopgain SNV	c.559C>T
3	KPNA7	Exon8	stopgain SNV	c.1213C>T
2	KPRP	Exon2	frameshift insertion	c.1660dupC
1	KPRP	Exon2	stoploss SNV	c.1738dupT
1	KPTN	Exon1	frameshift deletion	c.117_118delGG
8	KRBA1	Exon13	frameshift insertion	c.1656dupC
13	KRBA2	Exon2	frameshift deletion	c.469delC
1	KRI1	Exon17	frameshift insertion	c.1692dupC
1	KRT14	Exon8	frameshift deletion	c.1354delG
1	KRT14	Exon8	frameshift deletion	c.1350delC
1	KRT15	Exon6	frameshift deletion	c.1092_1093delCC
1	KRT15	Exon1	stopgain SNV	c.124C>T
1	KRT20	Exon1	frameshift insertion	c.358dupT
1	KRT222	Exon6	stopgain SNV	c.748C>T
1	KRT222	Exon2	frameshift deletion	c.110_111delTA
1	KRT23	Exon2	stopgain SNV	c.-4_3dupGGACCATG
1	KRT24	Exon6	stopgain SNV	c.1187dupA
1	KRT25	Exon3	stopgain SNV	c.517G>T
1	KRT27	Exon6	splicing	c.847-1G>A
1	KRT28	Exon3	stopgain SNV	c.592C>T
18	KRT31	Exon7	splicing	c.1097+1G>A
1	KRT33A	Exon2	frameshift deletion	c.354delG
1	KRT34	Exon4	stopgain SNV	c.864G>A
1	KRT35	Exon7	splicing	c.1220+1G>A
1	KRT35	Exon6	stopgain SNV	c.1051C>T
1	KRT36	Exon5	stopgain SNV	c.880C>T

1	KRT38	Exon5	frameshift deletion	c.926delG
3	KRT38	Exon3	stopgain SNV	c.703C>T
1	KRT38	Exon1	stopgain SNV	c.487C>T
7	KRT4	Exon1	frameshift insertion	c.240_241insC
1	KRT6A	Exon5	frameshift deletion	c.958delC
1	KRT6A	Exon5	frameshift deletion	c.956delT
1	KRT6B	Exon1	frameshift deletion	c.470delA
1	KRT6C	Exon4	splicing	c.756-1G>C
1	KRT71	Exon2	frameshift deletion	c.495delG
1	KRT72	Exon9	frameshift deletion	c.1376delG
2	KRT74	Exon5	splicing	c.748-2A>G
1	KRT75	Exon2	frameshift deletion	c.548delT
1	KRT76	Exon9	stopgain SNV	c.1839C>A
1	KRT76	Exon7	stopgain SNV	c.1363C>T
8	KRT76	Exon3	stopgain SNV	c.826G>T
2	KRT78	Exon5	frameshift deletion	c.760delC
1	KRT78	Exon1	frameshift insertion	c.138dupG
1	KRT79	Exon5	frameshift deletion	c.901delC
1	KRT79	Exon1	frameshift deletion	c.422delA
2	KRT81	Exon5	stopgain SNV	c.846T>A
2	KRT82	Exon9	stopgain SNV	c.1336A>T
1	KRT82	Exon5	stopgain SNV	c.815C>A
1	KRT83	Exon8	frameshift deletion	c._del
1	KRT83	Exon4	frameshift insertion	c.692_693insT
5	KRT83	Exon4	stopgain SNV	c.666C>A
19	KRT83	Exon3	stopgain SNV	c.601G>T
1	KRT85	Exon2	stopgain SNV	c.525C>A
2	KRT86	Exon9	frameshift deletion	c.1362_1363delTA
1	KRTAP10-11	Exon1	frameshift insertion	c.851dupG
10	KRTAP10-4	Exon1	stoploss SNV	c.1206A>C
14	KRTAP10-6	Exon1	frameshift insertion	c.134_135insAG

1	KRTAP10-7	Exon2	stopgain SNV	c.412C>T
1	KRTAP10-8	Exon1	stopgain SNV	c.487C>T
3	KRTAP1-1	Exon1	frameshift deletion	c.209delG
1	KRTAP1-1	Exon1	stopgain SNV	c.151C>T
1	KRTAP12-1	Exon1	frameshift deletion	c.158_159delCT
2	KRTAP13-1	Exon1	frameshift deletion	c.59_68delACTACCCAGC
4	KRTAP13-1	Exon1	stopgain SNV	c.90C>A
1	KRTAP13-1	Exon1	stoploss SNV	c.517T>C
6	KRTAP13-2	Exon1	stopgain SNV	c.397G>T
13	KRTAP15-1	Exon1	stopgain SNV	c.322G>T
14	KRTAP1-5	Exon1	frameshift deletion	c.396delC
2	KRTAP19-3	Exon1	frameshift deletion	c.161delG
2	KRTAP21-2	Exon1	stopgain SNV	c.211C>T
1	KRTAP24-1	Exon1	frameshift deletion	c.96delT
1	KRTAP27-1	Exon1	stopgain SNV	c.256C>T
1	KRTAP27-1	Exon1	frameshift deletion	c.139delC
1	KRTAP4-2	Exon1	stopgain SNV	c.199C>T
1	KRTAP4-5	Exon1	stopgain SNV	c.457C>T
1	KRTAP5-10	Exon1	frameshift deletion	c.588_589delGT
3	KRTAP5-1	Exon1	stopgain SNV	c.740C>G
1	KRTAP5-1	Exon1	stopgain SNV	c.561C>A
1	KRTAP5-4	Exon1	frameshift insertion	c.421dupT
3	KRTAP6-2	Exon1	frameshift insertion	c.118dupT
1	KRTAP9-1	Exon1	frameshift deletion	c.108delC
1	KRTAP9-1	Exon1	stopgain SNV	c.457_458insA
1	KSR1	Exon5	frameshift insertion	c.461dupC
1	L1TD1	Exon4	frameshift insertion	c.1217dupA
1	L1TD1	Exon4	frameshift insertion	c.1218_1219insAA
1	L1TD1	Exon4	frameshift deletion	c.1801_1804delGAAC
5	L1TD1	Exon4	frameshift deletion	c.1805_1808delTAAC
1	LACC1	Exon3	stopgain SNV	c.609T>G

1	LACE1	Exon2	frameshift deletion	c.252delA
1	LACE1	Exon6	frameshift insertion	c.702dupC
1	LAD1	Exon8	stopgain SNV	c.1394T>A
13	LAD1	Exon3	frameshift deletion	c.488delG
12	LAD1	Exon3	frameshift deletion	c.483_484delGG
1	LAG3	Exon5	frameshift deletion	c.850_851delCC
18	LAIR2	Exon3	stopgain SNV	c.226C>T
1	LAMA2	Exon21	frameshift deletion	c.3021_3022delAA
1	LAMA2	Exon58	frameshift deletion	c.8153delA
1	LAMA2	Exon58	splicing	c.8244+1G>A
1	LAMA4	Exon23	frameshift deletion	c.3015delT
1	LAMB1	Exon28	frameshift deletion	c.4390delA
2	LAMB1	Exon20	stopgain SNV	c.2520C>A
4	LAMB1	Exon11	splicing	c.1001-1G>C
1	LAMB2	Exon8	stopgain SNV	c.967C>T
1	LAMB3	Exon14	stopgain SNV	c.1903C>T
1	LAMB3	Exon12	frameshift insertion	c.1294_1295insT
1	LAMB3	Exon3	stopgain SNV	c.124C>T
6	LAMB4	Exon34	frameshift deletion	c.5265delA
1	LAMB4	Exon16	frameshift deletion	c.1897delG
1	LAMB4	Exon13	splicing	c.1470+1G>A
1	LAMB4	Exon9	splicing	c.870+1G>C
1	LAMC3	Exon4	splicing	c.976+1G>C
1	LANCL2	Exon9	stopgain SNV	c.1310C>G
1	LAPTM4B	Exon2	frameshift deletion	c.415delG
1	LARGE	Exon9	frameshift insertion	c.1013_1014insG
1	LARGE	Exon3	frameshift deletion	c.303_304delCT
1	LARP1B	Exon9	frameshift deletion	c.823delG
1	LARP1	Exon6	frameshift insertion	c.675dupC
1	LARP4B	Exon13	splicing	c.1233-1G>T
1	LARP4	Exon3	splicing	c.167-1G>C
1	LARP4	Exon12	splicing	c.1383+2_1383+2delT
1	LARP7	Exon7	frameshift deletion	c.650_654delAGAAG

1	LARP7	Exon8	frameshift deletion	c.1096_1097delAG
1	LARS2	Exon5	splicing	c.455+1G>T
5	LARS2	Exon18	splicing	c.2045-2A>T
1	LAT	Exon9	frameshift insertion	c.546_547dupTG
1	LAX1	Exon5	frameshift deletion	c.797_798delAT
1	LBP	Exon9	stopgain SNV	c.964C>T
1	LCA5L	Exon10	frameshift insertion	c.1667dupG
18	LCE1D	Exon2	stoploss SNV	c.343T>G
1	LCE3C	Exon1	frameshift deletion	c.223delA
1	LCE3E	Exon2	frameshift deletion	c.59delA
3	LCE4A	Exon1	stopgain SNV	c.9C>A
1	LCN2	Exon3	splicing	c.355+2T>C
1	LCORL	Exon7	frameshift deletion	c.839delC
1	LCT	Exon10	frameshift deletion	c.4453_4454delAT
1	LCT	Exon9	frameshift deletion	c.3967delG
1	LDHB	Exon3	frameshift deletion	c.224_242del CACCTAAAATTGTGGCAGA
1	LDHC	Exon5	frameshift deletion	c.548delC
1	LDHD	Exon6	stopgain SNV	c.648C>G
1	LDLRAD1	Exon5	stopgain SNV	c.457G>T
1	LDLRAP1	Exon6	frameshift deletion	c.604delT
1	LDLR	Exon1	frameshift insertion	c.9dupC
1	LDLR	Exon5	splicing	c.556+1G>A
1	LECT1	Exon5	stopgain SNV	c.554T>A
1	LEFTY1	Exon3	frameshift insertion	c.703dupC
1	LEO1	Exon1	frameshift deletion	c.37_38delGA
1	LEPRE1	Exon9	stopgain SNV	c.1459C>T
1	LETM2	Exon6	frameshift deletion	c.763delC
1	LETM2	Exon6	stopgain SNV	c.802C>T
6	LFNG	Exon2	frameshift deletion	c.163_166delGATG
1	LGALS12	Exon3	frameshift insertion	c.370_371insA
1	LGALS9B	Exon1	frameshift insertion	c.0_1dupGA
1	LGI1	Exon7	frameshift insertion	c.790dupG

1	LGI2	Exon8	frameshift insertion	c.1162_1163insC
1	LHFPL1	Exon4	stopgain SNV	c.507T>A
1	LHFPL2	Exon4	frameshift deletion	c.374delA
1	LHX2	Exon5	frameshift deletion	c.1102delA
1	LHX5	Exon1	frameshift insertion	c.170dupT
1	LIG4	Exon2	frameshift deletion	c.1751_1755delTAAGA
1	LILRA1	Exon7	frameshift deletion	c.1050delG
1	LILRA1	Exon7	stopgain SNV	c.1134C>A
1	LILRA2	Exon4	stopgain SNV	c.404T>G
1	LILRA2	Exon4	frameshift insertion	c.440_441insC
1	LILRA2	Exon4	frameshift deletion	c.444delA
4	LILRA2	Exon8	splicing	c.1307-1G>A
1	LILRA3	Exon6	frameshift deletion	c.1053delG
1	LILRA3	Exon5	frameshift insertion	c.850dupC
2	LILRA3	Exon3	frameshift deletion	c.340delC
1	LILRA3	Exon3	splicing	c.35-1G>C
2	LILRA4	Exon6	frameshift insertion	c.971_972insGT
1	LILRA5	Exon7	splicing	c.763+2T>C
2	LILRA6	Exon3	stopgain SNV	c.320C>A
1	LILRB1	Exon5	frameshift deletion	c.340delC
1	LILRB1	Exon7	stopgain SNV	c.885C>G
2	LILRB1	Exon15	splicing	c.1806+2_1806+2delT
1	LILRB3	Exon13	splicing	c.1752+2_1752+2delT
10	LILRB4	Exon11	splicing	c.1200+1_1200+1delG
1	LIMA1	Exon9	splicing	c.973-15_973-5delTTTTTTTTTT
1	LIMA1	Exon4	stopgain SNV	c.415C>T
3	LIMCH1	Exon7	stopgain SNV	c.537C>A
5	LIMS1	Exon2	splicing	c.192+1G>T
1	LIMS1	Exon10	stopgain SNV	c.962T>A
1	LIMS2	Exon7	frameshift deletion	c.654_657delCTGT
6	LIMS3L	Exon3	stopgain SNV	c.346C>T
8	LINS	Exon4	stopgain SNV	c.598G>T
2	LIPC	Exon5	frameshift insertion	c.738_739dupCG

1	LIPC	Exon8	frameshift deletion	c.1253delT
1	LIPE	Exon1	frameshift deletion	c.614delG
14	LIPJ	Exon6	splicing	c.330-1G>C
2	LIPT1	Exon2	frameshift deletion	c.369delG
1	LLGL1	Exon20	stopgain SNV	c.2893C>T
1	LLGL2	Exon9	splicing	c.827-2A>T
1	LLPH	Exon3	frameshift deletion	c.224delT
1	LMAN2	Exon1	frameshift insertion	c.74_75insT
1	LMBRD1	Exon16	frameshift deletion	c.1609_1612delGTCT
3	LMBRD1	Exon11	frameshift deletion	c.1056delG
1	LMBRD2	Exon10	stopgain SNV	c.1296T>G
1	LMF1	Exon8	frameshift deletion	c.1160_1161delTG
1	LMNB1	Exon3	splicing	c.642+2_642+5dupTAAC
1	LMO7	Exon1	frameshift deletion	c.73_74delAA
1	LMO7	Exon1	frameshift deletion	c.73delA
1	LMO7	Exon1	splicing	c.175+1G>A
6	LMO7	Exon2	splicing	c.225+2T>C
2	LMO7	Exon5	frameshift deletion	c.439_451delGATCTACAGGATT
1	LMTK3	Exon14	frameshift insertion	c.4218dupC
1	LNX1	Exon4	stopgain SNV	c.676C>T
1	LOC100132247	Exon7	frameshift deletion	c.1561delG
1	LOC100293516	Exon3	stopgain SNV	c.559C>T
1	LOC100507203	Exon2	frameshift deletion	c.301delT
6	LOC100509575	Exon5	stopgain SNV	c.351C>A
1	LOC120824	Exon1	frameshift deletion	c.90_91delTG
1	LOC388946	Exon2	frameshift deletion	c.208_209delTC
1	LOC399939	Exon5	splicing	c.739-18_739-18delT
1	LOC399939	Exon5	splicing	c.739-19_739-18insT
1	LOC440563	Exon2	stopgain SNV	c.460C>T
1	LOC649330	Exon1	frameshift deletion	c.790delG
2	LOC649330	Exon1	frameshift deletion	c.785delA
3	LOC729020	Exon1	stopgain SNV	c.178C>T
1	LOH12CR1	Exon4	frameshift deletion	c.382_383delCT

1	LONP2	Exon3	stopgain SNV	c.560T>A
1	LONP2	Exon11	stopgain SNV	c.1717C>T
1	LONP2	Exon11	stopgain SNV	c.1756G>T
1	LONP2	Exon13	splicing	c.1939-1G>A
1	LOXHD1	Exon22	frameshift deletion	c.3362delC
1	LOXL3	Exon5	frameshift insertion	c.824dupG
1	LOXL4	Exon4	frameshift insertion	c.567_568insC
1	LOXL4	Exon2	frameshift insertion	c.164dupG
1	LOXL4	Exon2	frameshift deletion	c.135_136delCC
1	LOXL4	Exon2	frameshift deletion	c.128delA
1	LPA	Exon40	frameshift deletion	c.6051delC
2	LPA	Exon33	stopgain SNV	c.5227G>T
2	LPA	Exon33	splicing	c.4974-2A>G
1	LPA	Exon31	stopgain SNV	c.4873C>T
1	LPA	Exon30	splicing	c.4631+1G>A
1	LPA	Exon4	splicing	c.209+1G>A
1	LPHN1	Exon21	frameshift deletion	c.3572_3573delGC
1	LPHN2	Exon11	frameshift insertion	c.2151_2152insC
4	LPIN1	Exon11	splicing	c.1605+1G>C
1	LPIN2	Exon17	frameshift deletion	c.2235_2236delTG
1	LPIN3	Exon12	stopgain SNV	c.1594C>T
1	LPIN3	Exon20	frameshift deletion	c.2486_2487delAA
2	LPO	Exon8	frameshift insertion	c.1014_1017dupCCAT
2	LRCH3	Exon17	stopgain SNV	c.1819C>T
1	LRCH4	Exon12	frameshift deletion	c.1356delC
1	LRCH4	Exon3	frameshift deletion	c.485delG
1	LRCH4	Exon3	frameshift deletion	c.483delG
2	LRGUK	Exon7	splicing	c.939+1G>A
1	LRIF1	Exon4	frameshift deletion	c.2070_2074delAAAGA
1	LRIG1	Exon15	frameshift deletion	c.2426_2427delTG
1	LRIG1	Exon15	stopgain SNV	c.2423C>G
6	LRIG1	Exon6	stopgain SNV	c.730C>T
1	LRMP	Exon6	frameshift	c.96_97delCC

			deletion	
11	LRP1B	Exon56	splicing	c.8663-1G>A
1	LRP1B	Exon52	stopgain SNV	c.8368G>T
1	LRP1	Exon23	frameshift deletion	c.3567delC
1	LRP1	Exon24	frameshift deletion	c.3933delC
5	LRP1	Exon81	frameshift insertion	c.12575dupC
4	LRP2	Exon72	frameshift insertion	c.13139dupC
2	LRP5L	Exon3	stopgain SNV	c.76C>T
1	LRP5	Exon10	stopgain SNV	c.2270G>A
1	LRP8	Exon12	frameshift deletion	c.1880delT
1	LRR1	Exon2	frameshift insertion	c.278dupG
1	LRR1	Exon3	stopgain SNV	c.383C>G
1	LRRC10	Exon1	frameshift insertion	c.241_242insA
4	LRRC16B	Exon15	splicing	c.1217+2T>A
1	LRRC16B	Exon31	stopgain SNV	c.2873G>A
1	LRRC16B	Exon38	frameshift insertion	c.3955_3956insCC
1	LRRC19	Exon3	frameshift deletion	c.110delA
1	LRRC30	Exon1	frameshift deletion	c.416delG
1	LRRC31	Exon3	splicing	c.176-1_176-1delG
1	LRRC31	Exon1	frameshift insertion	c.159dupA
2	LRRC34	Exon11	stopgain SNV	c.1387C>T
2	LRRC34	Exon9	frameshift deletion	c.989_993delCCTTT
1	LRRC37A3	Exon3	frameshift deletion	c.1660delA
1	LRRC37A	Exon9	frameshift insertion	c.4218dupT
1	LRRC39	Exon8	stopgain SNV	c.691C>T
2	LRRC3	Exon2	stopgain SNV	c.166C>T
1	LRRC42	Exon2	splicing	c.473+1G>T
3	LRRC46	Exon1	splicing	c.10+1_10+2dupGT
2	LRRC46	Exon3	frameshift deletion	c.120delT
1	LRRC48	Exon9	frameshift deletion	c.900delA
1	LRRC52	Exon1	stopgain SNV	c.141C>A
1	LRRC55	Exon1	stopgain SNV	c.143G>A
1	LRRC56	Exon7	frameshift	c.349_350insAAGA

			insertion	
3	LRRC69	Exon5	frameshift deletion	c.645delA
1	LRRC70	Exon2	stopgain SNV	c.1507C>T
1	LRRC71	Exon12	splicing	c.1241-1G>C
1	LRRC8A	Exon3	stopgain SNV	c.1762A>T
1	LRRC8B	Exon7	frameshift deletion	c.727_728delAA
1	LRRC8C	Exon3	stopgain SNV	c.352C>T
1	LRRC8E	Exon3	frameshift insertion	c.1029_1030insG
1	LRRC8E	Exon3	frameshift deletion	c.2113delG
1	LRRCC1	Exon7	frameshift deletion	c.1019_1020delGA
1	LRRCC1	Exon12	frameshift deletion	c.1845delG
1	LRRCC1	Exon19	stoploss SNV	c.3099A>G
1	LRRFIP2	Exon26	frameshift deletion	c.1759_1760delCT
1	LRRIQ1	Exon6	stopgain SNV	c.619C>T
1	LRRIQ1	Exon8	frameshift deletion	c.1571delA
1	LRRIQ1	Exon13	stopgain SNV	c.3170G>A
2	LRRIQ3	Exon3	splicing	c.249+1G>A
5	LRRN2	Exon2	stopgain SNV	c.1792C>T
1	LRTM1	Exon3	frameshift deletion	c.1013_1014delAG
2	LRTM1	Exon2	stopgain SNV	c.487C>T
2	LSM14A	Exon7	frameshift deletion	c.826delC
1	LSR	Exon6	frameshift deletion	c.1052delG
3	LTBP2	Exon23	stopgain SNV	c.3442G>T
1	LTF	Exon5	frameshift deletion	c.589delG
5	LTK	Exon20	stopgain SNV	c.2437G>T
1	LTK	Exon13	frameshift deletion	c.1695delC
1	LTK	Exon11	frameshift deletion	c.1393_1394delCC
1	LUM	Exon2	frameshift deletion	c.120delA
1	LUZP4	Exon4	frameshift insertion	c.879_883dupATCTC
1	LY6G5C	Exon1	frameshift deletion	c.24_25delAG
2	LY75-CD302	Exon16	stopgain SNV	c.2298G>A
2	LY75-CD302	Exon14	frameshift	c.2141delG

			deletion	
1	LY75	Exon32	splicing	c.4549+1G>A
1	LYPD3	Exon6	splicing	c.545-2A>G
1	LYRM2	Exon1	stopgain SNV	c.40A>T
1	LYSMD1	Exon3	splicing	c.37-1_37-1delG
7	LYST	Exon45	stopgain SNV	c.10149T>G
1	LYVE1	Exon2	stopgain SNV	c.148C>T
1	LZTR1	Exon8	splicing	c.791+1G>A
1	LZTS2	Exon3	frameshift insertion	c.451_452insC
1	MAB21L3	Exon5	frameshift insertion	c.597dupG
1	MAB21L3	Exon6	stopgain SNV	c.739G>T
2	MACF1	Exon41	frameshift deletion	c.5452delC
1	MACF1	Exon42	stopgain SNV	c.5911C>T
1	MACF1	Exon65	stopgain SNV	c.11452G>T
1	MAD2L2	Exon4	frameshift deletion	c.204delG
1	MAD2L2	Exon4	frameshift deletion	c.202delC
1	MADD	Exon3	stopgain SNV	c.549C>G
5	MADD	Exon29	splicing	c.4366-1G>T
1	MAGEA10	Exon5	frameshift deletion	c.497delG
1	MAGEA11	Exon5	frameshift deletion	c.746delA
1	MAGEA11	Exon5	frameshift insertion	c.742_743insG
2	MAGEA3	Exon3	stopgain SNV	c.730A>T
1	MAGEA4	Exon3	frameshift deletion	c.476delT
1	MAGEB16	Exon2	frameshift deletion	c.67_68delCC
1	MAGEC1	Exon4	stopgain SNV	c.1801C>T
1	MAGEC1	Exon4	stopgain SNV	c.2151G>A
3	MAGEC3	Exon3	frameshift deletion	c.455_471del ACACCCTTTCCCTTCCT
1	MAGEC3	Exon4	stopgain SNV	c.577C>T
2	MAGEE2	Exon1	frameshift deletion	c.774delC
2	MAGEF1	Exon1	frameshift insertion	c.52dupG
4	MAK16	Exon5	frameshift deletion	c.370delA
1	MAMDC2	Exon3	splicing	c.149-2A>T
3	MAMSTR	Exon6	frameshift insertion	c.485dupC

1	MAN1B1	Exon9	frameshift insertion	c.1409_1410insAA
1	MAN2A2	Exon2	frameshift deletion	c.187delG
1	MAN2A2	Exon11	splicing	c.1875+2T>G
1	MAN2A2	Exon17	frameshift deletion	c.2645_2648delAGGA
1	MAN2B1	Exon15	splicing	c.1827+1G>C
1	MAN2B2	Exon7	frameshift deletion	c.984delC
3	MAN2B2	Exon12	frameshift deletion	c.1840delA
1	MAN2C1	Exon3	frameshift deletion	c.307delA
1	MAP1B	Exon5	frameshift deletion	c.1146delC
1	MAP3K11	Exon7	frameshift insertion	c.1630dupT
1	MAP3K11	Exon4	frameshift deletion	c.1227delG
1	MAP3K12	Exon13	frameshift deletion	c.2339delC
6	MAP3K15	Exon25	stopgain SNV	c.3406C>T
1	MAP3K15	Exon18	frameshift deletion	c.2421_2422delGA
1	MAP3K15	Exon15	stopgain SNV	c.2029C>T
1	MAP3K1	Exon14	frameshift deletion	c.3586_3587delTC
2	MAP3K3	Exon17	stopgain SNV	c.1936G>T
5	MAP3K5	Exon29	splicing	c.3987+1G>A
1	MAP3K5	Exon26	stopgain SNV	c.3703C>T
9	MAP3K5	Exon4	frameshift deletion	c.683delG
4	MAP3K6	Exon17	stopgain SNV	c.2285T>A
1	MAP3K6	Exon10	splicing	c.1256-2A>G
1	MAP4K2	Exon22	frameshift insertion	c.1519_1520insC
1	MAP7D1	Exon2	frameshift insertion	c.245dupC
1	MAP7D3	Exon8	stopgain SNV	c.748G>T
1	MAP7D3	Exon3	stopgain SNV	c.136A>T
1	MAP7	Exon16	frameshift deletion	c.1959delG
1	MAPK13	Exon1	stopgain SNV	c.75C>A
1	MAPK15	Exon4	splicing	c.286+1G>A
1	MAPK15	Exon5	frameshift deletion	c.307delA
1	MAPK15	Exon5	frameshift deletion	c.310_311delCC
4	MAPK1IP1L	Exon3	frameshift deletion	c.405delT

1	MAPK1	Exon1	frameshift deletion	c.41delT
1	MAPKAP1	Exon10	frameshift deletion	c.897delC
6	MAPKAPK5	Exon11	stopgain SNV	c.1006C>T
1	MAPKBP1	Exon19	stopgain SNV	c.2108C>G
4	MAPRE3	Exon5	frameshift insertion	c.543dupC
1	Mar-10	Exon7	stopgain SNV	c.1963G>T
1	Mar-10	Exon3	stopgain SNV	c.103C>T
1	Mar-04	Exon1	frameshift deletion	c.406delT
1	MARCO	Exon5	stopgain SNV	c.553C>T
3	MARK3	Exon6	stopgain SNV	c.481C>T
1	MARS2	Exon1	frameshift insertion	c.1260_1261insCCCC
1	MASP2	Exon11	splicing	c.1297+1G>A
1	MASP2	Exon8	splicing	c.890-1G>A
2	MAST1	Exon11	splicing	c.1078-2_1078-2delA
1	MAST2	Exon17	frameshift insertion	c.1979dupG
1	MAST2	Exon29	frameshift insertion	c.4131_4132insGG
1	MAST2	Exon29	frameshift deletion	c.4917delC
1	MAST3	Exon9	frameshift deletion	c.823_824delAT
1	MAST3	Exon10	frameshift deletion	c.874delG
1	MAST4	Exon22	frameshift insertion	c.2839dupA
1	MAST4	Exon23	frameshift deletion	c.2999delA
1	MAST4	Exon28	frameshift insertion	c.3832_3833insA
1	MASTL	Exon6	splicing	c.661-2A>G
2	MATK	Exon2	stopgain SNV	c.25C>T
2	MATN4	Exon3	stopgain SNV	c.163C>T
5	MATR3	Exon13	splicing	c.1778+1_1778+2delGT
1	MAU2	Exon16	frameshift deletion	c.1475delA
2	MB21D2	Exon2	frameshift deletion	c.921delG
1	MBD3	Exon2	frameshift insertion	c.196_197dupAC
1	MBD4	Exon8	splicing	c.1562-1G>T
1	MBD4	Exon3	frameshift deletion	c.942_945delAAGA
2	MBD4	Exon3	frameshift insertion	c.939dupA
2	MBNL3	Exon9	stoploss	c.775T>A

			SNV	
1	MC1R	Exon1	frameshift insertion	c.537dupC
1	MC5R	Exon1	frameshift deletion	c.254delT
1	MCAM	Exon5	frameshift insertion	c.497_498insT
1	MCCC1	Exon17	frameshift insertion	c.1915_1916insAT
1	MCC	Exon12	frameshift deletion	c._del
1	MCC	Exon2	stopgain SNV	c.259A>T
1	MCEE	Exon2	stopgain SNV	c.175G>T
2	MCF2L2	Exon14	stopgain SNV	c.1716T>G
1	MCF2L	Exon6	frameshift deletion	c.544_545delCT
1	MCF2L	Exon7	frameshift insertion	c.697_698insC
1	MCF2	Exon8	frameshift deletion	c.625_626delAT
1	MCHR1	Exon2	frameshift deletion	c.610delA
1	MCM2	Exon4	frameshift deletion	c.607delC
1	MCM3AP	Exon23	frameshift deletion	c.4939_4940delCT
1	MCM3AP	Exon2	frameshift deletion	c.1399delA
4	MCM3	Exon2	stopgain SNV	c.169A>T
7	MCM5	Exon8	splicing	c.920-1G>T
1	MCM5	Exon16	frameshift deletion	c.2039_2043delAGCGC
1	MCM8	Exon8	frameshift deletion	c._del
1	MCM9	Exon3	frameshift deletion	c.673delG
1	MCOLN1	Exon4	splicing	c.406-2A>G
10	MCTP1	Exon11	stopgain SNV	c.1670C>G
1	MCTP2	Exon15	stopgain SNV	c.1927A>T
1	MCU	Exon8	stoploss SNV	c.1054T>A
1	MDC1	Exon5	frameshift deletion	c.638_642delCCTTC
1	MDC1	Exon5	frameshift deletion	c.618_636del CGGCCTTGGGCCGCTTTT
2	MDC1	Exon5	frameshift insertion	c.620dupG
1	MDH1	Exon7	frameshift deletion	c.684delG
1	MDN1	Exon7	frameshift insertion	c.1181dupT
5	ME1	Exon4	splicing	c.362+1G>A
1	ME2	Exon8	stopgain SNV	c.808C>T

1	MECP2	Exon4	frameshift deletion	c.1140delG
1	MED12L	Exon4	frameshift deletion	c.440delC
3	MED12L	Exon4	frameshift deletion	c.449_450delCT
1	MED12	Exon2	frameshift deletion	c.171delC
2	MED12	Exon24	splicing	c.3355-1G>A
1	MED12	Exon29	frameshift deletion	c.4092delG
1	MED12	Exon29	frameshift insertion	c.4098dupG
1	MED13L	Exon10	stopgain SNV	c.1991C>A
1	MED13	Exon26	frameshift deletion	c.5908_5909delCA
1	MED17	Exon7	frameshift deletion	c.1102delC
1	MED17	Exon8	stopgain SNV	c.1150A>T
1	MED22	Exon5	frameshift deletion	c.479delC
5	MED23	Exon23	stopgain SNV	c.2836C>T
1	MED25	Exon4	frameshift insertion	c.396_397insT
1	MED31	Exon4	frameshift deletion	c.223_224delAT
1	MED4	Exon3	stopgain SNV	c.214C>T
1	MEF2B	Exon5	frameshift insertion	c.450_451insC
1	MEGF10	Exon16	stopgain SNV	c.1888C>T
7	MEGF10	Exon25	splicing	c.3232+1G>T
1	MEGF8	Exon27	frameshift deletion	c.4751delA
11	MEI1	Exon14	stopgain SNV	c.1603A>T
1	MEI1	Exon16	stopgain SNV	c.1810C>T
1	MEOX1	Exon4	stopgain SNV	c.319C>T
2	MEOX1	Exon4	splicing	c.297+2T>G
1	MEOX2	Exon1	frameshift deletion	c.207_208delCC
1	MEOX2	Exon1	frameshift deletion	c.205delC
3	MEP1B	Exon9	stopgain SNV	c.855G>A
2	MEPE	Exon4	frameshift deletion	c.207_210delGAAA
3	MEPE	Exon4	frameshift deletion	c.617delG
1	METAP1D	Exon6	splicing	c.541-1G>A
5	MET	Exon8	frameshift deletion	c.1978delA
1	MET	Exon8	frameshift deletion	c.1979delC

1	METTL13	Exon2	stopgain SNV	c.280C>T
1	METTL17	Exon9	stopgain SNV	c.772C>T
1	METTL18	Exon2	frameshift deletion	c.125_126delAA
8	METTL1	Exon2	splicing	c.110+2T>A
2	METTL20	Exon2	splicing	c.314+1G>A
1	METTL20	Exon4	stopgain SNV	c.601C>T
1	METTL21A	Exon4	stoploss SNV	c.655T>C
3	METTL2A	Exon6	stopgain SNV	c.677C>G
1	METTL3	Exon5	stopgain SNV	c.901C>T
1	METTL7A	Exon2	frameshift deletion	c.508_511delTTCT
2	METTL7B	Exon2	stopgain SNV	c.670C>T
3	MFHAS1	Exon1	stopgain SNV	c.2240T>A
1	MFHAS1	Exon1	frameshift deletion	c.1166delT
1	MFN1	Exon13	frameshift insertion	c.1331_1332dupAA
1	MFNG	Exon8	splicing	c.899+1_899+1delG
1	MFNG	Exon6	frameshift deletion	c.773delA
1	MFNG	Exon6	frameshift deletion	c.740_741delTG
1	MFSD4	Exon9	splicing	c.1489+1G>T
1	MFSD5	Exon2	frameshift deletion	c.632delG
7	MFSD5	Exon2	stopgain SNV	c.645T>A
2	MFSD6L	Exon1	frameshift deletion	c.1271delT
1	MFSD6L	Exon1	stopgain SNV	c.863G>A
1	MFSD6	Exon7	stopgain SNV	c.1912A>T
1	MFSD9	Exon4	stopgain SNV	c.306G>A
1	MGAM	Exon36	frameshift insertion	c.4268_4269insTGCC
1	MGAT4A	Exon9	frameshift deletion	c.798delA
2	MGST2	Exon5	stopgain SNV	c.325C>T
1	MIA2	Exon1	frameshift deletion	c.93delA
2	MIA3	Exon3	frameshift deletion	c.277delA
1	MIB1	Exon5	frameshift deletion	c.685delG
16	MICAL2	Exon22	splicing	c.2847+2_2847+3delTG
2	MICALCL	Exon3	frameshift insertion	c.1193_1194insA

1	MICA	Exon2	splicing	c.325+1G>A
12	MICA	Exon4	splicing	c.892+1_892+1delG
1	MICA	Exon5	frameshift deletion	c.951delT
5	MICA	Exon5	frameshift insertion	c.952_953insCTGCTGCTGCT
20	MICA	Exon5	frameshift deletion	c.953_956delGCTG
2	MICB	Exon3	stopgain SNV	c.577C>T
1	MICB	Exon4	frameshift deletion	c.817delC
1	MID1IP1	Exon2	frameshift deletion	c.167delT
1	MID1IP1	Exon2	frameshift deletion	c.173delG
1	MID1IP1	Exon2	frameshift deletion	c.180delC
1	MID1	Exon3	frameshift deletion	c._del
9	MID1	Exon4	splicing	c.661-1_661-1delG
1	MIEN1	Exon2	frameshift deletion	c.132delT
1	MIF4GD	Exon2	stopgain SNV	c.7G>T
1	MILR1	Exon4	frameshift deletion	c.491delA
1	MINK1	Exon16	frameshift insertion	c.2019_2020insT
1	MINK1	Exon21	frameshift insertion	c.2648_2649insA
1	MINK1	Exon25	stopgain SNV	c.3143G>A
4	MIS18BP1	Exon11	frameshift deletion	c.2068delA
3	MKI67IP	Exon7	frameshift insertion	c.741_742dupTC
1	MKI67IP	Exon6	frameshift deletion	c.672delT
1	MKI67	Exon13	frameshift deletion	c.7702delG
1	MKI67	Exon13	stopgain SNV	c.3763C>T
1	MKNK1	Exon12	frameshift deletion	c.1110delG
1	MKNK2	Exon6	frameshift deletion	c.356delC
1	MKRN2	Exon4	frameshift deletion	c.604delC
1	MKRN2	Exon4	frameshift insertion	c.609_610insG
1	MLF1	Exon6	frameshift insertion	c.439dupA
1	MLF2	Exon8	stoploss SNV	c.745T>G
5	MLH1	Exon1	frameshift insertion	c.3dupG
1	MLH1	Exon11	frameshift deletion	c.921delG
1	MLH3	Exon2	frameshift	c.2220delC

			deletion	
1	MLKL	Exon10	stopgain SNV	c.1339G>T
5	MLKL	Exon8	frameshift deletion	c.1107_1110delCAGA
1	MLL2	Exon13	frameshift deletion	c.4125_4126delAA
1	MLL3	Exon39	splicing	c.7443-18_7443-6del TTTTTTTTTTTT
11	MLL4	Exon8	frameshift insertion	c.3059dupG
1	MLL4	Exon16	frameshift deletion	c.4181delC
1	MLL4	Exon16	frameshift deletion	c.4187delC
1	MLL4	Exon16	frameshift deletion	c.4188delA
14	MLL	Exon25	splicing	c.6150-2A>C
1	MLL	Exon25	splicing	c.6150-1G>T
2	MLL	Exon27	stopgain SNV	c.8662G>T
1	MLL	Exon27	frameshift insertion	c.9912_9913insT
1	MLLT10	Exon18	frameshift deletion	c.2136delT
1	MLLT6	Exon10	frameshift insertion	c.1436_1437insA
3	MLNR	Exon2	frameshift deletion	c.999_1000delTC
1	MLNR	Exon2	frameshift deletion	c.1067_1068delAC
1	MLNR	Exon2	frameshift deletion	c.1071_1072delCA
1	MLNR	Exon2	frameshift insertion	c.1078_1079insC
1	MLNR	Exon2	frameshift deletion	c.1082delA
2	MLPH	Exon6	frameshift deletion	c.664delG
3	MMAA	Exon2	stopgain SNV	c.433C>T
1	MMAA	Exon4	frameshift deletion	c.593_596delCTGA
1	MMAB	Exon9	stopgain SNV	c.700C>T
2	MMACHC	Exon2	frameshift insertion	c.271dupA
1	MMEL1	Exon10	stopgain SNV	c.904C>T
1	MME	Exon7	splicing	c.536-1G>A
13	MME	Exon23	frameshift deletion	c.2172delG
1	MME	Exon23	stopgain SNV	c.2205C>A
2	MMP10	Exon8	stopgain SNV	c.1200C>A
17	MMP10	Exon5	splicing	c.497-2A>G
8	MMP12	Exon5	frameshift insertion	c.630dupC

1	MMP12	Exon1	frameshift deletion	c.83delA
3	MMP15	Exon2	stopgain SNV	c.186C>A
1	MMP19	Exon3	splicing	c.173+1G>A
1	MMP19	Exon1	stopgain SNV	c.13C>T
1	MMP1	Exon10	stopgain SNV	c.1389G>A
14	MMP1	Exon4	frameshift deletion	c.573delT
1	MMP1	Exon2	splicing	c.105+2T>C
1	MMP20	Exon8	splicing	c.954-2A>T
1	MMP20	Exon2	frameshift deletion	c.308delC
1	MMP27	Exon10	stopgain SNV	c.1415C>G
1	MMP27	Exon3	stopgain SNV	c.370C>T
1	MMP3	Exon3	frameshift insertion	c.457_464dupTATGAAGG
7	MMP8	Exon10	stopgain SNV	c.1348C>T
1	MMP8	Exon10	splicing	c.1294+1G>A
1	MMP8	Exon9	splicing	c.1190+2T>C
1	MMRN1	Exon2	stopgain SNV	c.653T>A
1	MMS19	Exon19	frameshift deletion	c.1814delT
1	MMS19	Exon12	splicing	c.924+2T>A
14	MMS22L	Exon22	frameshift deletion	c.3360delC
1	MNDA	Exon5	stopgain SNV	c.880G>T
11	MNS1	Exon5	frameshift deletion	c.605delA
1	MOB1B	Exon5	frameshift deletion	c.327_330delGAAA
1	MOCOS	Exon4	splicing	c.300-1G>C
1	MOCOS	Exon6	frameshift deletion	c.1087_1088delCT
1	MOCOS	Exon15	frameshift deletion	c.2536delA
1	MOCS1	Exon3	frameshift insertion	c.348_349insC
1	MOCS2	Exon2	stopgain SNV	c.88C>T
1	MOGAT1	Exon3	frameshift insertion	c.416_423dupATCTTCAC
1	MOGAT1	Exon4	splicing	c.479-2A>G
13	MOGAT1	Exon5	frameshift deletion	c.834delG
1	MOGAT2	Exon2	frameshift insertion	c.142_143dupCT
1	MOGS	Exon5	frameshift deletion	c.826_829delGGCC
1	MOGS	Exon5	frameshift insertion	c.782_783dupGC

1	MOK	Exon10	frameshift insertion	c.945_946insTC
18	MOK	Exon4	stopgain SNV	c.280C>T
1	MON1B	Exon3	splicing	c.149-1G>A
1	MON2	Exon32	splicing	c.4576-1G>C
1	MORN3	Exon3	frameshift deletion	c.410_411delAC
1	MOSC1	Exon3	stopgain SNV	c.598C>T
1	MOS	Exon1	stopgain SNV	c.963G>A
1	MOV10	Exon6	splicing	c.971+2dupT
2	MOV10	Exon9	frameshift deletion	c.1434delT
1	MOV10	Exon9	frameshift deletion	c.1449delG
1	MOV10	Exon9	splicing	c.1472+1_1472+3delGTG
1	MPHOSPH9	Exon14	frameshift deletion	c.2190delG
1	MPHOSPH9	Exon6	frameshift deletion	c.1184delT
1	MPL	Exon7	splicing	c.981-1G>C
2	MPO	Exon13	splicing	c.2031-2A>C
3	MPP1	Exon12	stopgain SNV	c.1195C>T
2	MPP1	Exon12	splicing	c.1099-1_1099-1delG
2	MPPE1	Exon7	frameshift insertion	c.606_607insCC
1	MPV17L2	Exon4	frameshift insertion	c.493dupC
1	MPZL2	Exon2	frameshift deletion	c.72delA
1	MPZL3	Exon5	frameshift deletion	c.644_645delGT
2	MRAS	Exon6	splicing	c.528-2_528-2delA
1	MRC2	Exon9	frameshift deletion	c.1555delC
8	MRGRPX3	Exon3	stopgain SNV	c.920G>A
1	MRGRPX4	Exon1	frameshift deletion	c.848_849delAA
1	MRM1	Exon1	stopgain SNV	c.393G>A
9	MRO	Exon4	frameshift deletion	c.340_341delCT
1	MRPL14	Exon3	frameshift deletion	c.77delC
1	MRPL1	Exon5	stopgain SNV	c.514G>T
1	MRPL20	Exon3	splicing	c.198+1G>A
1	MRPL28	Exon3	stopgain SNV	c.334C>T
1	MRPL2	Exon5	frameshift deletion	c.549delT
2	MRPL32	Exon3	stopgain SNV	c.529C>T
1	MRPL46	Exon3	frameshift	c.584dupT

			insertion	
1	MRPL46	Exon3	stopgain SNV	c.568C>T
1	MRPL50	Exon2	frameshift insertion	c.472_473dupTA
1	MRPS18C	Exon3	splicing	c.151-2A>C
13	MRPS27	Exon11	stoploss SNV	c.1244A>C
1	MRPS2	Exon4	stopgain SNV	c.358C>T
1	MRPS33	Exon2	stopgain SNV	c.196C>T
1	MRPS7	Exon5	frameshift deletion	c.650delG
1	MRT04	Exon8	frameshift deletion	c.652delA
3	MS4A12	Exon2	frameshift deletion	c.187delA
3	MS4A12	Exon4	splicing	c.334-1G>T
1	MS4A14	Exon3	stopgain SNV	c.345C>A
1	MS4A14	Exon4	stopgain SNV	c.1807C>T
1	MS4A14	Exon4	stopgain SNV	c.1912C>T
1	MS4A2	Exon6	stopgain SNV	c.574G>T
1	MS4A4A	Exon6	frameshift deletion	c.392_395delTCAA
1	MS4A5	Exon4	stopgain SNV	c.352C>T
2	MS4A6A	Exon8	splicing	c.651+1G>A
2	MS4A6A	Exon4	frameshift deletion	c.201delA
1	MS4A6A	Exon3	frameshift deletion	c.44delC
1	MSH4	Exon20	stopgain SNV	c.2698C>T
3	MSH6	Exon5	frameshift insertion	c.3261dupC
1	MSL2	Exon2	stopgain SNV	c.1009A>T
1	MSLNL	Exon10	stopgain SNV	c.2110C>T
1	MSLNL	Exon3	frameshift deletion	c.441delC
1	MSMO1	Exon6	stopgain SNV	c.801G>A
1	MSMO1	Exon6	stopgain SNV	c.804G>A
9	MSR1	Exon6	stopgain SNV	c.877C>T
1	MSRB3	Exon4	splicing	c.77-2A>G
10	MST1	Exon17	stopgain SNV	c.1951C>T
3	MST1	Exon12	splicing	c.1251-2A>C
1	MST1R	Exon1	frameshift insertion	c.696dupT
1	MST1R	Exon1	frameshift	c.345delC

			deletion	
1	MT1X	Exon2	splicing	c.29-2A>T
16	MTA2	Exon17	stopgain SNV	c.1831A>T
1	MTCP1	Exon3	stopgain SNV	c.152delT
1	MTERFD3	Exon3	frameshift deletion	c.763_766delCTTT
1	MTERF	Exon3	stopgain SNV	c.236T>G
1	MTF2	Exon8	splicing	c.729-1G>T
1	MTHFD1L	Exon7	stopgain SNV	c.709C>T
1	MTHFD1	Exon11	stopgain SNV	c.970C>T
1	MTHFR	Exon2	frameshift deletion	c.147delG
1	MTHFR	Exon2	frameshift insertion	c.142_143insC
1	MTHFR	Exon2	stopgain SNV	c.138_139insT
1	MTIF2	Exon16	frameshift deletion	c.2131_2134delTGTT
1	MTIF2	Exon15	frameshift deletion	c.1977delT
1	MTL5	Exon9	stopgain SNV	c.1287C>A
1	MTMR10	Exon10	stopgain SNV	c.989C>A
1	MTMR11	Exon1	frameshift insertion	c.14dupG
1	MTOR	Exon54	stopgain SNV	c.7361C>A
1	MTRR	Exon13	splicing	c.1758-2dupA
1	MTUS1	Exon2	frameshift deletion	c.862delG
12	MUC16	Exon69	frameshift deletion	c.41901delC
1	MUC16	Exon55	splicing	c.40418-2A>G
1	MUC16	Exon46	frameshift insertion	c.39692_39693insC
1	MUC16	Exon3	frameshift deletion	c.26049delG
1	MUC16	Exon3	frameshift deletion	c.17027delG
1	MUC16	Exon3	stopgain SNV	c.11787T>G
1	MUC16	Exon1	frameshift deletion	c.6979delT
1	MUC16	Exon1	frameshift deletion	c.5998_5999delCA
1	MUC16	Exon1	frameshift deletion	c.3525_3526delAG
1	MUC16	Exon1	stopgain SNV	c.1855G>T
1	MUC17	Exon3	stopgain SNV	c.4006A>T
1	MUC17	Exon3	frameshift deletion	c.4790delC

1	MUC17	Exon3	frameshift deletion	c.11338delT
2	MUC17	Exon5	stopgain SNV	c.12559C>T
1	MUC17	Exon5	splicing	c.12663+1dupG
1	MUC17	Exon10	frameshift deletion	c.13250_13251delAA
1	MUC17	Exon12	stopgain SNV	c.13405C>T
1	MUC17	Exon13	stopgain SNV	c.13444C>T
1	MUC1	Exon4	frameshift deletion	c.236_237delTG
11	MUC20	Exon3	splicing	c.682-1_682-1delC
5	MUC20	Exon3	splicing	c.682-1C>G
1	MUC20	Exon3	splicing	c.682-1_682-0insG
1	MUC2	Exon24	frameshift deletion	c.3293delA
1	MUC2	Exon24	frameshift deletion	c.3295delG
1	MUC2	Exon45	frameshift deletion	c.7782delC
1	MUC2	Exon45	frameshift deletion	c.7783delG
1	MUC4	Exon3	frameshift deletion	c.313delC
3	MUC5B	Exon31	frameshift insertion	c.13441_13442insC
1	MUC5B	Exon43	frameshift deletion	c.16564_16565delCT
6	MUC6	Exon31	frameshift insertion	c.6722_6723insC
3	MUC6	Exon31	frameshift deletion	c.6547_6548delTT
1	MUC6	Exon31	frameshift deletion	c.6541delT
12	MUC6	Exon31	frameshift deletion	c.6330delA
1	MUC6	Exon17	frameshift insertion	c.2208_2214dupCACTGTC
1	MUC7	Exon4	frameshift insertion	c.246dupC
1	MUL1	Exon4	frameshift deletion	c.1026delG
1	MUM1	Exon5	frameshift insertion	c.782_783insA
1	MUS81	Exon16	frameshift deletion	c.1603delG
1	MUSK	Exon14	stopgain SNV	c.2560C>T
1	MVD	Exon3	frameshift insertion	c.199_200insGG
1	MVP	Exon7	frameshift insertion	c.846_847insA
1	MX2	Exon3	frameshift deletion	c.252delG
1	MXD3	Exon3	frameshift deletion	c.178delT
1	MXI1	Exon5	stopgain SNV	c.664C>T

1	MXRA5	Exon5	frameshift insertion	c.1976_1977insT
1	MYBBP1A	Exon26	frameshift insertion	c.3804dupC
1	MYBBP1A	Exon7	frameshift deletion	c.881_882delTG
1	MYBBP1A	Exon6	frameshift insertion	c.579_580insT
1	MYBPC2	Exon18	stopgain SNV	c.1976G>A
1	MYBPC2	Exon18	frameshift deletion	c.1995delT
1	MYBPC2	Exon21	frameshift deletion	c.2413delG
2	MYBPHL	Exon6	stopgain SNV	c.763C>T
4	MYCBP2	Exon56	frameshift deletion	c.9027delA
11	MYCBPAP	Exon7	frameshift deletion	c.956delG
6	MYEF2	Exon12	splicing	c.1138+1G>T
1	MYEOV	Exon2	splicing	c.141+1G>C
1	MYEOV	Exon3	frameshift insertion	c.611_612insA
1	MYH10	Exon13	stopgain SNV	c.1444A>T
1	MYH10	Exon11	frameshift deletion	c.1137delG
1	MYH11	Exon20	splicing	c.2271+1_2271+1delG
1	MYH13	Exon31	frameshift deletion	c.4348delC
1	MYH13	Exon22	frameshift deletion	c.2626delG
5	MYH15	Exon28	stopgain SNV	c.3421C>T
1	MYH15	Exon10	splicing	c.835+1G>A
1	MYH15	Exon2	stopgain SNV	c.130C>T
1	MYH1	Exon22	stopgain SNV	c.2510dupA
1	MYH1	Exon10	frameshift insertion	c.868dupT
1	MYH3	Exon35	frameshift deletion	c.5114delA
10	MYH3	Exon35	stopgain SNV	c.5113C>T
1	MYH4	Exon13	splicing	c.1009-2A>C
1	MYH4	Exon9	frameshift deletion	c.799delG
1	MYH4	Exon8	frameshift deletion	c.685delC
1	MYH7B	Exon19	frameshift deletion	c.1612_1613delAT
1	MYH7B	Exon26	stopgain SNV	c.2494A>T
1	MYH7B	Exon32	frameshift insertion	c.3711_3712insATCC
1	MYH7	Exon23	frameshift deletion	c.2716delG

1	MYH7	Exon20	stopgain SNV	c.2263C>T
3	MYH8	Exon13	stopgain SNV	c.1209C>A
1	MYH8	Exon4	frameshift insertion	c.243_244insGT
1	MYH9	Exon32	frameshift deletion	c.4475_4476delAG
1	MYH9	Exon32	frameshift deletion	c.4469delA
17	MYH9	Exon13	stopgain SNV	c.1423A>T
5	MYL1	Exon1	frameshift deletion	c.1delA
1	MYL1	Exon1	frameshift insertion	c.1dupA
1	MYL7	Exon2	stopgain SNV	c.103C>T
1	MYLK	Exon12	stopgain SNV	c.1641G>A
1	MYNN	Exon9	stopgain SNV	c.1636A>T
1	MYNN	Exon9	stopgain SNV	c.1778C>G
1	MYO10	Exon27	frameshift deletion	c.3655delC
1	MYO10	Exon25	frameshift insertion	c.2814_2815insT
1	MYO15A	Exon2	stopgain SNV	c.1023C>A
1	MYO16	Exon20	stopgain SNV	c.2209C>T
1	MYO1A	Exon4	stopgain SNV	c.277C>T
1	MYO1C	Exon10	stopgain SNV	c.1114G>T
1	MYO1F	Exon9	stopgain SNV	c.808C>T
1	MYO1H	Exon13	splicing	c.1454+1G>A
1	MYO1H	Exon25	frameshift insertion	c.2576dupG
1	MYO3B	Exon10	splicing	c.1068+2T>C
1	MYO3B	Exon20	stopgain SNV	c.2419C>T
1	MYO6	Exon5	splicing	c.262-1G>A
1	MYO6	Exon5	frameshift deletion	c.384_385delTT
1	MYO7A	Exon13	frameshift deletion	c.1378delC
1	MYO7A	Exon13	frameshift deletion	c.1383_1386delGCAG
1	MYO7A	Exon14	frameshift insertion	c.1641_1642insT
1	MYO7B	Exon6	splicing	c.592+1_592+3delGTA
1	MYO7B	Exon28	frameshift deletion	c.3586delC
1	MYO7B	Exon28	frameshift insertion	c.3609_3610insCA
1	MYO9B	Exon22	frameshift insertion	c.3530_3531insG

1	MYOCD	Exon10	frameshift deletion	c.1917delG
2	MYOC	Exon3	stopgain SNV	c.1102C>T
2	MYOF	Exon41	stopgain SNV	c.4513C>T
1	MYOF	Exon28	stopgain SNV	c.2940G>A
1	MYOF	Exon12	stopgain SNV	c.1096C>T
1	MYOM2	Exon33	frameshift insertion	c.3896dupG
1	MYOM3	Exon30	frameshift deletion	c.3571delG
1	MYOM3	Exon12	frameshift insertion	c.1278dupC
3	MYT1L	Exon14	stopgain SNV	c.1857C>A
1	MYT1	Exon7	frameshift deletion	c.515delG
1	MYT1	Exon7	frameshift deletion	c.520_521delAA
1	MYT1	Exon17	frameshift insertion	c.2542_2543insA
1	MYT1	Exon17	stopgain SNV	c.2546_2547insA
1	MYT1	Exon17	frameshift insertion	c.2551_2552insT
1	MZB1	Exon1	frameshift deletion	c.169delG
1	MZB1	Exon1	frameshift insertion	c.163_164insAT
1	N4BP2L2	Exon7	frameshift deletion	c.1212_1215delTAGA
1	N4BP3	Exon3	frameshift deletion	c.416_417delGG
1	N4BP3	Exon5	frameshift deletion	c.1405_1406delCG
1	N4BP3	Exon5	frameshift insertion	c.1417dupC
1	N6AMT1	Exon3	splicing	c.221+1G>T
3	NAA16	Exon2	stopgain SNV	c.67C>T
17	NAA16	Exon20	frameshift deletion	c.2436delC
2	NAA20	Exon5	stopgain SNV	c.325C>T
1	NAAA	Exon7	splicing	c.839+1G>A
1	NAALADL2	Exon2	stopgain SNV	c.334C>T
1	NACA2	Exon1	frameshift deletion	c.334delT
1	NACA2	Exon1	stopgain SNV	c.47T>A
1	NACC2	Exon3	frameshift deletion	c.1009_1010delTA
1	NADK	Exon10	frameshift deletion	c.1188_1189delGA
1	NAF1	Exon8	stopgain SNV	c.1081C>T

1	NAGLU	Exon3	stopgain SNV	c.653_654insA
1	NAGLU	Exon4	frameshift insertion	c.751_752insC
1	NAIP	Exon10	frameshift deletion	c.826delC
5	NANOG	Exon4	frameshift deletion	c.915_916delGT
1	NAP1L1	Exon5	splicing	c.104-1G>A
1	NAP1L1	Exon5	splicing	c.104-2dupA
2	NAP1L4	Exon3	stopgain SNV	c.20C>G
1	NARF	Exon9	frameshift insertion	c.713_714insA
1	NAT10	Exon13	splicing	c.1401+1G>A
1	NAT10	Exon14	frameshift deletion	c.1461_1464delTCTG
2	NAT10	Exon27	frameshift insertion	c.2844dupA
2	NAT1	Exon5	stopgain SNV	c.559C>T
1	NAT2	Exon2	stopgain SNV	c.268G>T
1	NAT6	Exon2	frameshift deletion	c.800delC
1	NAT8B	Exon1	frameshift deletion	c.67delC
1	NBAS	Exon30	frameshift deletion	c.3425delT
1	NBAS	Exon17	stopgain SNV	c.1741C>T
1	NBAS	Exon14	stopgain SNV	c.1185G>A
1	NBEAL1	Exon50	splicing	c.7325-2A>G
1	NBN	Exon10	frameshift deletion	c.1142delC
1	NBPF10	Exon84	stopgain SNV	c.10642G>T
1	NBPF14	Exon22	frameshift deletion	c.2633delA
1	NBPF14	Exon16	frameshift deletion	c.1810delG
4	NBPF14	Exon17	splicing	c.1791-1G>T
1	NBPF15	Exon18	stopgain SNV	c.1334C>G
2	NBPF15	Exon22	frameshift deletion	c.1880delA
9	NBPF1	Exon28	stopgain SNV	c.3118C>T
1	NBPF3	Exon2	frameshift deletion	c.1delA
9	NBPF3	Exon8	frameshift deletion	c.986_992del
15	NBPF3	Exon11	frameshift deletion	c.1287delT
1	NBPF3	Exon11	frameshift insertion	c.1291dupT
8	NBPF3	Exon11	frameshift deletion	c.1331delA

4	NBPF3	Exon11	frameshift insertion	c.1333_1334insG
1	NBPF7	Exon7	frameshift deletion	c.948delG
1	NBPF7	Exon3	stopgain SNV	c.493C>T
3	NBPF7	Exon2	splicing	c.235+2T>A
10	NBPF9	Exon6	stoploss SNV	c.691T>C
1	NBPF9	Exon7	frameshift deletion	c.890delC
1	NBPF9	Exon21	stopgain SNV	c.2642G>A
1	NCAM1	Exon10	frameshift deletion	c.1224delT
1	NCAPG2	Exon18	frameshift insertion	c.2150_2151insCCAGC
1	NCAPH	Exon10	frameshift insertion	c.1252_1255dupTGCC
4	NCBP1	Exon2	stopgain SNV	c.92T>A
1	NCF1	Exon7	stopgain SNV	c.579G>A
1	NCKIPSD	Exon13	frameshift deletion	c.2147delT
13	NCL	Exon3	frameshift deletion	c.545delC
12	NCL	Exon3	frameshift deletion	c.538delG
4	NCL	Exon3	frameshift deletion	c.533delC
1	NCOA3	Exon7	stopgain SNV	c.697C>T
1	NCOA6	Exon10	frameshift deletion	c._del
1	NCOR1	Exon37	frameshift deletion	c.5437delC
2	NCOR1	Exon34	splicing	c.4742-2A>T
13	NCOR1	Exon5	stopgain SNV	c.568C>T
1	NCOR1	Exon4	frameshift deletion	c.305delA
1	NCOR2	Exon35	frameshift deletion	c.4822delA
1	NCOR2	Exon35	frameshift deletion	c.4816delC
1	NCOR2	Exon35	frameshift deletion	c.4810delC
1	NCOR2	Exon30	frameshift insertion	c.3732_3733insCG
1	NCOR2	Exon17	frameshift insertion	c.1732_1733insA
1	NCR1	Exon3	frameshift deletion	c.194delG
1	NCS1	Exon3	splicing	c.228+1G>C
1	NDRG2	Exon16	frameshift deletion	c.1083delG
1	NDUFA4L2	Exon3	frameshift deletion	c.91delA
1	NDUFA4L2	Exon3	frameshift	c.84_85insT

			insertion	
2	NDUFA8	Exon4	frameshift deletion	c.390delA
1	NDUFAF3	Exon3	frameshift deletion	c.112_113delCA
2	NDUFAF4	Exon3	stoploss SNV	c.526T>G
1	NDUFAF4	Exon3	stopgain SNV	c.517C>T
1	NDUFB10	Exon3	frameshift insertion	c.399_400insA
1	NDUFB11	Exon2	frameshift insertion	c.218_219insT
1	NDUFB11	Exon2	frameshift deletion	c.212delC
1	NDUFB3	Exon3	stopgain SNV	c.208G>T
1	NDUFS2	Exon6	frameshift deletion	c.600delC
1	NDUFV3	Exon3	frameshift insertion	c.552dupG
1	NDUFV3	Exon3	splicing	c.1264+2T>A
1	NEB	Exon144	frameshift deletion	c.19193delT
1	NEB	Exon70	stopgain SNV	c.10134G>A
6	NECAB2	Exon6	stopgain SNV	c.536C>A
1	NECAB2	Exon11	frameshift insertion	c.1000_1003dupGTCA
1	NECAB3	Exon5	frameshift deletion	c.324_327delGGTG
1	NEDD8	Exon4	frameshift deletion	c.154_157delGATG
1	NEDD8	Exon4	frameshift insertion	c.149_150insA
1	NEFH	Exon2	frameshift insertion	c.994_995insCG
1	NEFM	Exon1	frameshift deletion	c.864delC
5	NEIL1	Exon2	splicing	c.434+2T>C
1	NEIL3	Exon10	frameshift insertion	c.1813dupT
1	NEK10	Exon16	stopgain SNV	c.1255A>T
1	NEK11	Exon10	splicing	c.1082+1G>A
1	NEK8	Exon15	stoploss SNV	c.2077delT
1	NEK9	Exon16	splicing	c.1840+2T>C
1	NEK9	Exon11	stopgain SNV	c.1243C>T
1	NEK9	Exon10	stopgain SNV	c.1078C>T
1	NENF	Exon3	stopgain SNV	c.250C>T
1	NEO1	Exon20	frameshift insertion	c.3075dupC
1	NES	Exon4	frameshift insertion	c.3336_3337insTG

1	NES	Exon4	stopgain SNV	c.2420T>G
1	NES	Exon4	stopgain SNV	c.1991T>G
1	NEU3	Exon3	stoploss SNV	c.1386A>T
1	NEURL2	Exon1	frameshift insertion	c.406dupA
1	NEURL4	Exon11	frameshift deletion	c.1976delC
7	NEURL	Exon6	frameshift insertion	c.1599_1600insTG
1	NEURL	Exon6	frameshift deletion	c.1621delC
1	NEUROD1	Exon2	frameshift deletion	c.744delC
1	NEUROD6	Exon2	stopgain SNV	c.145A>T
1	NEUROG3	Exon2	stopgain SNV	c.403delC
1	NEXN	Exon6	splicing	c.298-1G>A
1	NEXN	Exon10	frameshift deletion	c.1279delG
1	NF1	Exon20	frameshift deletion	c.2376_2380delTAACT
14	NFATC3	Exon9	frameshift deletion	c.2899_2900delAC
1	NFKBIZ	Exon13	frameshift insertion	c.1852_1853dupTA
1	NFXL1	Exon5	splicing	c.516+1G>C
1	NGDN	Exon4	stopgain SNV	c.232G>T
1	NGEF	Exon6	frameshift insertion	c.941_942insAG
1	NGLY1	Exon3	stopgain SNV	c.293C>G
1	NHLRC1	Exon1	frameshift deletion	c.560delA
1	NID2	Exon10	frameshift insertion	c.2270_2271insTC
1	NIF3L1	Exon4	frameshift insertion	c.605_606dupGT
1	NIF3L1	Exon4	frameshift insertion	c.655dupA
1	NINL	Exon24	frameshift deletion	c.4142_4143delCT
7	NIN	Exon18	stopgain SNV	c.3581G>A
3	NIPA2	Exon10	frameshift deletion	c.679delG
1	NIPA2	Exon6	frameshift deletion	c.101delG
10	NIPBL	Exon12	frameshift deletion	c.3405delT
2	NIPBL	Exon43	splicing	c.7264-1G>A
1	NIPSNAP1	Exon8	frameshift deletion	c.686delA
2	NIPSNAP3A	Exon3	frameshift deletion	c.372_373delAA
1	NISCH	Exon8	frameshift	c.841_842insT

			insertion	
1	NISCH	Exon16	frameshift deletion	c.1721delC
1	NISCH	Exon21	frameshift deletion	c.4028delC
1	NISCH	Exon21	frameshift deletion	c.4030_4031delGC
1	NKAPL	Exon1	frameshift deletion	c.2delT
1	NKAPL	Exon1	frameshift deletion	c.340delG
1	NKAPL	Exon1	frameshift deletion	c.696_699delGAAA
5	NKTR	Exon13	frameshift insertion	c.1847dupC
3	NKX1-2	Exon1	frameshift deletion	c.126delT
1	NLGN4X	Exon5	stopgain SNV	c.1281G>A
1	NLRC4	Exon4	stopgain SNV	c.928C>T
1	NLRP10	Exon2	stopgain SNV	c.1054C>T
1	NLRP12	Exon9	stopgain SNV	c.3046C>T
1	NLRP12	Exon3	stopgain SNV	c.1854C>G
2	NLRP13	Exon9	frameshift deletion	c.2639_2640delCA
2	NLRP13	Exon5	frameshift insertion	c.1319dupT
10	NLRP13	Exon5	frameshift deletion	c.1255_1258delTTTC
1	NLRP5	Exon2	frameshift deletion	c.246delA
1	NLRP8	Exon1	stopgain SNV	c.283C>T
1	NLRP8	Exon3	frameshift deletion	c.1649delG
2	NLRP8	Exon4	frameshift insertion	c.2159dupT
1	NLRX1	Exon5	frameshift deletion	c.343delA
1	NME1	Exon2	frameshift deletion	c.27delC
1	NMRAL1	Exon3	frameshift deletion	c.196delG
1	NMRAL1	Exon3	stopgain SNV	c.166C>T
1	NOBOX	Exon5	frameshift insertion	c.933dupG
1	NOC2L	Exon6	frameshift deletion	c.660delG
1	NOC2L	Exon6	frameshift deletion	c.651delC
1	NOC3L	Exon12	stopgain SNV	c.1417C>T
1	NOC3L	Exon9	frameshift deletion	c.971delT
1	NOD2	Exon1	frameshift deletion	c.59_60delTC

1	NOD2	Exon1	frameshift deletion	c.63delA
1	NOD2	Exon4	frameshift deletion	c.1006delC
12	NOD2	Exon11	frameshift insertion	c.3019dupC
3	NOL10	Exon11	stopgain SNV	c.826A>T
1	NOL10	Exon11	frameshift deletion	c.827delA
1	NOL3	Exon4	frameshift deletion	c.126delG
1	NOL3	Exon5	frameshift insertion	c.489dupA
1	NOL3	Exon5	splicing	c.619+1G>A
2	NOL6	Exon7	stopgain SNV	c.932T>A
1	NOMO2	Exon12	frameshift deletion	c.1318_1321delAAGT
1	NOMO2	Exon11	frameshift deletion	c.1081delG
5	NOMO2	Exon7	frameshift deletion	c.635delT
1	NOMO3	Exon13	frameshift deletion	c.1417_1418delAC
1	NOMO3	Exon19	stopgain SNV	c.2122G>T
1	NONO	Exon4	frameshift deletion	c.471delA
1	NOP14	Exon13	frameshift insertion	c.1794_1795insTG
1	NOP14	Exon13	frameshift deletion	c.1787delG
1	NOP58	Exon9	stopgain SNV	c.802C>T
3	NOS1	Exon26	stopgain SNV	c.3951C>A
1	NOS2	Exon6	frameshift deletion	c.561delC
1	NOSTRIN	Exon21	frameshift deletion	c.1612_1615delAATG
3	NOTCH2NL	Exon3	stopgain SNV	c.220C>T
1	NOTCH2	Exon27	stopgain SNV	c.4966C>T
1	NOTCH2	Exon7	frameshift deletion	c.1126_1127delGA
1	NOTCH2	Exon3	splicing	c.74-2A>G
1	NOX3	Exon14	splicing	c.1581-2A>G
1	NOX3	Exon12	frameshift deletion	c.1489_1499delACTGACGTGAT
1	NOX3	Exon2	stopgain SNV	c.130C>T
1	NOX4	Exon18	frameshift deletion	c.1300_1301delTA
1	NOX5	Exon4	frameshift insertion	c.319_320insAT
2	NOX5	Exon6	stopgain SNV	c.794G>A
1	NOX5	Exon8	frameshift	c.1157delA

			deletion	
1	NOX5	Exon9	splicing	c.1267-1G>A
1	NPAS1	Exon6	stopgain SNV	c.727C>T
1	NPAT	Exon13	frameshift deletion	c.2338_2339delCC
9	NPAT	Exon6	stopgain SNV	c.533C>G
1	NPC1L1	Exon17	splicing	c.3368+1G>A
1	NPC1	Exon18	stopgain SNV	c.2670C>G
5	NPC2	Exon5	splicing	c.441+1G>A
6	NPFFR1	Exon3	splicing	c.8-2A>G
1	NPFFR2	Exon1	frameshift deletion	c.84delG
2	NPHP1	Exon15	stopgain SNV	c.1558A>T
4	NPHP1	Exon11	splicing	c.1025-2A>C
1	NPHP3	Exon15	stopgain SNV	c.2104C>T
1	NPHP3	Exon2	frameshift deletion	c.469delA
1	NPHS2	Exon3	frameshift insertion	c.450dupT
1	NP1P	Exon8	frameshift deletion	c.1003_1004delGT
2	NPM2	Exon4	splicing	c.145-1G>T
1	NPM2	Exon4	frameshift deletion	c.173delA
1	NPM2	Exon4	frameshift deletion	c.176delT
15	NPR1	Exon14	frameshift deletion	c.2228_2229delGT
1	NPVF	Exon3	frameshift insertion	c.553_554insG
1	NPY2R	Exon2	stopgain SNV	c.58G>T
1	NQO1	Exon6	splicing	c.519+1G>C
2	NQO1	Exon4	frameshift deletion	c.357_360delAGTG
1	NR2E3	Exon2	splicing	c.119-2A>C
1	NR2E3	Exon5	frameshift deletion	c.724_725delTC
1	NR2F1	Exon1	frameshift deletion	c.244delC
1	NR3C1	Exon4	stopgain SNV	c.1354C>T
1	NR4A2	Exon5	frameshift deletion	c.997_1001delGTTTCG
1	NR4A2	Exon5	frameshift deletion	c.999_1000delTC
1	NRAP	Exon41	splicing	c.4983+1G>A
1	NRF1	Exon11	frameshift insertion	c.1438dupG
1	NRG4	Exon6	frameshift insertion	c.341_344dupAACA
1	NRIP1	Exon4	stopgain SNV	c.856A>T

2	NRK	Exon14	stopgain SNV	c.2338A>T
3	NRK	Exon18	frameshift deletion	c.2957delA
1	NRP1	Exon3	frameshift deletion	c.282delT
1	NRP2	Exon7	stopgain SNV	c.1068C>A
2	NRSN1	Exon4	stopgain SNV	c.469C>T
1	NRXN1	Exon2	frameshift insertion	c.447_448insGC
11	NRXN2	Exon7	splicing	c.1152+2T>A
8	NRXN2	Exon5	frameshift insertion	c.808dupG
1	NSD1	Exon18	splicing	c.4815+2T>A
1	NSD1	Exon19	frameshift deletion	c.4964delT
3	NSD1	Exon21	splicing	c.5203-1G>T
3	NSF	Exon3	frameshift deletion	c.185delT
1	NSMCE2	Exon5	frameshift deletion	c.346delT
1	NSUN2	Exon3	frameshift deletion	c.311delC
1	NSUN4	Exon4	stopgain SNV	c.694C>T
1	NSUN6	Exon9	frameshift deletion	c.1027delG
1	NSUN6	Exon4	frameshift insertion	c.327dupA
11	NT5C1B	Exon5	stopgain SNV	c.533C>A
1	NT5C	Exon4	stopgain SNV	c.367C>T
1	NT5DC2	Exon13	frameshift insertion	c.1299_1300insC
1	NTM	Exon8	frameshift deletion	c.1009delG
4	NTPCR	Exon4	splicing	c.295-1G>A
1	NTRK1	Exon8	frameshift insertion	c.745dupC
1	NUAK2	Exon3	splicing	c.352+2T>C
6	NUB1	Exon11	frameshift deletion	c.1176delG
1	NUBP1	Exon4	splicing	c.259-1G>C
1	NUCB1	Exon2	frameshift deletion	c.129_130delGA
1	NUDT12	Exon6	frameshift insertion	c.1132_1133insG
1	NUDT12	Exon2	stopgain SNV	c.56C>G
1	NUDT13	Exon6	frameshift insertion	c.511_512insT
12	NUDT13	Exon9	frameshift insertion	c.986dupC
4	NUDT16L1	Exon3	stoploss SNV	c.577T>C
17	NUDT17	Exon8	frameshift	c.900_904delTAAAA

			deletion	
17	NUDT17	Exon8	frameshift deletion	c.897delG
1	NUDT17	Exon5	frameshift insertion	c.579dupA
1	NUDT18	Exon3	stoploss SNV	c.617A>G
1	NUDT22	Exon5	frameshift insertion	c.752_753insA
1	NUDT6	Exon5	frameshift insertion	c.352dupG
2	NUF2	Exon5	splicing	c.337+1G>T
1	NUF2	Exon14	splicing	c.1261-1G>T
1	NUMBL	Exon7	frameshift insertion	c.711_712insCC
1	NUP107	Exon3	splicing	c.187+1G>A
1	NUP133	Exon9	frameshift deletion	c.1069delG
1	NUP155	Exon20	splicing	c.2025-1G>A
1	NUP210L	Exon27	frameshift insertion	c.3692_3693insT
1	NUP210	Exon21	splicing	c.2734-2A>T
1	NUP210	Exon10	stopgain SNV	c.1159C>T
11	NUP214	Exon21	frameshift deletion	c.2846delA
2	NUP98	Exon8	frameshift deletion	c.812delG
1	NWD1	Exon8	stopgain SNV	c.2128C>T
1	NWD1	Exon16	stopgain SNV	c.3415G>T
1	NXF3	Exon8	frameshift deletion	c.698delT
1	NXF3	Exon5	splicing	c.352-18_352-3del TCTTTCTTTCACTCAT
1	OAS1	Exon6	frameshift deletion	c.1183_1184delTG
1	OAS2	Exon8	stopgain SNV	c.1531A>T
7	OAS3	Exon12	stopgain SNV	c.2530C>T
3	OASL	Exon3	stopgain SNV	c.553G>T
1	OAZ1	Exon2	frameshift deletion	c.160delC
1	OAZ2	Exon2	frameshift deletion	c.64delA
2	OBFC2B	Exon3	stopgain SNV	c.82C>T
1	OBP2B	Exon4	frameshift deletion	c.302delT
1	OBSCN	Exon10	stopgain SNV	c.3079A>T
1	OBSCN	Exon31	stopgain SNV	c.8467A>T
1	OBSCN	Exon66	splicing	c.16661-2A>G
3	OBSL1	Exon16	stopgain SNV	c.4951G>T

1	OC90	Exon11	frameshift deletion	c.765delA
1	OCIAD2	Exon6	splicing	c.265+2dupT
3	OCM	Exon1	stopgain SNV	c.49C>T
1	ODAM	Exon4	frameshift deletion	c.360delA
1	ODF1	Exon2	frameshift deletion	c.665_672delGCCCCTGC
2	ODF3L1	Exon1	stopgain SNV	c.43C>T
1	ODF3L1	Exon4	frameshift insertion	c.487_488insGCGT
1	ODF3L2	Exon3	stopgain SNV	c.319_320insG
1	ODF3L2	Exon3	stopgain SNV	c.308_309insA
1	ODF3L2	Exon3	frameshift insertion	c.305_306insAC
13	ODZ1	Exon29	frameshift deletion	c.5774delG
1	ODZ2	Exon27	frameshift insertion	c.5942dupC
1	ODZ4	Exon32	frameshift insertion	c.6933dupG
7	OFD1	Exon3	stopgain SNV	c.211delA
1	OGFOD1	Exon10	frameshift deletion	c.1155delT
2	OGFRL1	Exon5	frameshift insertion	c.533dupC
1	OGG1	Exon3	frameshift deletion	c.562delG
1	OGG1	Exon4	stopgain SNV	c.671G>A
14	OIT3	Exon5	frameshift deletion	c.695delG
10	OLFM4	Exon2	frameshift deletion	c.348_349delAC
6	OLFM4	Exon4	stopgain SNV	c.640C>T
1	OLFML2A	Exon5	frameshift deletion	c.910_911delGG
2	OLFML3	Exon3	frameshift deletion	c.600delA
1	OLFML3	Exon3	stopgain SNV	c.1138C>T
1	OLR1	Exon6	stopgain SNV	c.742C>T
1	OMP	Exon1	stopgain SNV	c.139C>T
1	OPA1	Exon2	stopgain SNV	c.246C>A
18	OPN3	Exon3	splicing	c.693+1G>T
1	OPN4	Exon3	frameshift deletion	c.370delG
4	OPRD1	Exon3	frameshift deletion	c.832delC
1	OPRK1	Exon4	stopgain SNV	c.787C>T

1	OPTC	Exon6	frameshift deletion	c.823_824delCC
1	OPTN	Exon3	splicing	c.369+2T>C
1	OR10A4	Exon1	frameshift insertion	c.224dupA
4	OR10A6	Exon1	stopgain SNV	c.916C>T
1	OR10A6	Exon1	stopgain SNV	c.877C>T
1	OR10A7	Exon1	frameshift deletion	c.500delC
1	OR10AD1	Exon1	stopgain SNV	c.486T>G
4	OR10AD1	Exon1	frameshift insertion	c.201dupG
11	OR10C1	Exon1	stopgain SNV	c.163C>T
1	OR10G2	Exon1	frameshift deletion	c.625delA
1	OR10G7	Exon1	stopgain SNV	c.575C>A
1	OR10H4	Exon1	stopgain SNV	c.450G>A
1	OR10H4	Exon1	frameshift insertion	c.930dupA
1	OR10J3	Exon1	frameshift deletion	c.926delA
18	OR10J5	Exon1	stoploss SNV	c.930A>T
4	OR10P1	Exon1	frameshift deletion	c.69delG
1	OR10Q1	Exon1	frameshift deletion	c.703delT
4	OR10R2	Exon1	stopgain SNV	c.475C>T
1	OR10S1	Exon1	frameshift insertion	c.878dupT
17	OR10V1	Exon1	stopgain SNV	c.367C>T
1	OR10Z1	Exon1	stopgain SNV	c.459C>A
1	OR11G2	Exon1	frameshift insertion	c.680dupG
1	OR11H12	Exon1	frameshift deletion	c.716delC
1	OR11H1	Exon1	frameshift deletion	c.718delA
1	OR11H1	Exon1	frameshift deletion	c.114delT
1	OR11H2	Exon2	frameshift deletion	c.718delG
1	OR11H4	Exon1	frameshift deletion	c.111delC
1	OR11H6	Exon1	frameshift deletion	c.389_390delGT
1	OR11H6	Exon1	frameshift deletion	c.696delC
1	OR13A1	Exon4	stopgain SNV	c.806dupA
1	OR13A1	Exon4	frameshift insertion	c.459dupG

1	OR13A1	Exon4	frameshift deletion	c.454delA
1	OR13C4	Exon1	frameshift deletion	c.72_73delGA
1	OR13C5	Exon1	stopgain SNV	c.623delT
1	OR13C5	Exon1	frameshift deletion	c.513_516delTAAC
17	OR13C5	Exon1	frameshift deletion	c.243_244delGC
1	OR13C8	Exon1	stopgain SNV	c.26C>A
3	OR13C9	Exon1	frameshift deletion	c.243_244delAC
1	OR13C9	Exon1	frameshift deletion	c.174delT
1	OR13D1	Exon1	frameshift insertion	c.757dupA
1	OR13D1	Exon1	stopgain SNV	c.966T>G
1	OR13G1	Exon1	frameshift deletion	c.729delA
1	OR13J1	Exon1	frameshift deletion	c.573delC
1	OR14C36	Exon1	stopgain SNV	c.864delC
1	OR1A2	Exon1	frameshift deletion	c.129_139delGCTCATCATCT
3	OR1D5	Exon1	frameshift deletion	c.358delT
9	OR1E2	Exon1	frameshift deletion	c.876delT
1	OR1E2	Exon1	frameshift deletion	c.726_735delTATCTGCAAG
11	OR1F1	Exon1	stopgain SNV	c.697G>T
1	OR1J1	Exon1	frameshift deletion	c.750_753delCTAT
11	OR1J1	Exon1	stopgain SNV	c.705C>A
1	OR1J2	Exon1	stopgain SNV	c.305dupA
2	OR1J2	Exon1	frameshift deletion	c.736_737delTC
8	OR1N2	Exon1	frameshift deletion	c.546delC
1	OR1N2	Exon1	frameshift deletion	c.546_547delCG
1	OR1N2	Exon1	frameshift deletion	c.548delT
1	OR1N2	Exon1	frameshift deletion	c.936_937delAG
1	OR1S1	Exon1	stopgain SNV	c.736G>T
1	OR1S1	Exon1	frameshift deletion	c.821delT
1	OR1S2	Exon1	frameshift deletion	c.947delA
10	OR1S2	Exon1	stopgain SNV	c.736G>T
1	OR2A2	Exon1	frameshift insertion	c.156dupT

1	OR2A5	Exon1	stopgain SNV	c.929C>G
1	OR2AG2	Exon1	frameshift deletion	c.510_511delGT
5	OR2B11	Exon1	stopgain SNV	c.26delT
3	OR2B11	Exon1	frameshift deletion	c.24delC
1	OR2B2	Exon1	frameshift deletion	c.985delA
1	OR2C3	Exon2	frameshift insertion	c.550dupC
4	OR2D2	Exon1	frameshift deletion	c.809_810delAA
2	OR2D2	Exon1	stopgain SNV	c.192C>A
1	OR2F1	Exon1	frameshift deletion	c.819delG
7	OR2G6	Exon1	frameshift deletion	c.885_886delAA
1	OR2L2	Exon1	stopgain SNV	c.347C>G
1	OR2L2	Exon1	stopgain SNV	c.793C>T
2	OR2L3	Exon1	stopgain SNV	c.483T>G
1	OR2M3	Exon1	stoploss SNV	c.937T>A
1	OR2S2	Exon1	stopgain SNV	c.219C>A
1	OR2T10	Exon1	stopgain SNV	c.600C>G
1	OR2T11	Exon1	stopgain SNV	c.505C>T
2	OR2T11	Exon1	frameshift insertion	c.259_260dupAA
1	OR2T11	Exon1	stopgain SNV	c.184C>T
1	OR2T12	Exon1	frameshift deletion	c.747_748delTT
1	OR2T12	Exon1	stopgain SNV	c.385C>T
1	OR2T1	Exon1	frameshift deletion	c.472delG
2	OR2T1	Exon1	stopgain SNV	c.597G>A
1	OR2T27	Exon1	stoploss SNV	c.954A>C
4	OR2T27	Exon1	stopgain SNV	c.876dupT
1	OR2T27	Exon1	stopgain SNV	c.808C>T
1	OR2T27	Exon1	frameshift deletion	c.695_696delAG
9	OR2T27	Exon1	frameshift insertion	c.452dupG
1	OR2T2	Exon1	frameshift deletion	c.493_494delAT
3	OR2T2	Exon1	frameshift deletion	c.612_618delCGTGCTG
2	OR2T2	Exon1	frameshift deletion	c.636_639delATCT

1	OR2T35	Exon1	stopgain SNV	c.951_952insTG
15	OR2T35	Exon1	frameshift deletion	c.609_615delCGTGCTG
1	OR2T3	Exon1	stopgain SNV	c.167C>A
1	OR2T3	Exon1	frameshift insertion	c.823dupC
1	OR2T4	Exon1	frameshift deletion	c.407_410delACGT
3	OR2T4	Exon1	frameshift insertion	c.448_449insCG
6	OR2T5	Exon1	stopgain SNV	c.70C>T
3	OR2T8	Exon1	frameshift insertion	c.151_152insG
8	OR2W3	Exon1	stopgain SNV	c.70G>T
2	OR2W5	Exon1	stopgain SNV	c.64G>T
5	OR3A1	Exon1	stopgain SNV	c.274A>T
1	OR3A1	Exon1	frameshift deletion	c.127delA
1	OR4A5	Exon1	stopgain SNV	c.925G>T
1	OR4A5	Exon1	frameshift deletion	c.808delG
1	OR4A5	Exon1	stopgain SNV	c.445G>T
3	OR4C15	Exon1	stopgain SNV	c.1036G>T
2	OR4C16	Exon1	frameshift deletion	c.169delA
1	OR4C3	Exon1	frameshift deletion	c.103delA
4	OR4C46	Exon1	frameshift deletion	c.136_164delACCATCACTG CCAGCCCATCACTGGGGTC
20	OR4D10	Exon1	stopgain SNV	c.691G>T
1	OR4D11	Exon1	frameshift deletion	c.53_56delCTCA
3	OR4D1	Exon1	frameshift deletion	c.170_171delCA
5	OR4D1	Exon1	stoploss SNV	c.931dupT
10	OR4D6	Exon1	frameshift deletion	c.697delC
4	OR4F17	Exon1	frameshift insertion	c.75dupT
1	OR4F21	Exon1	stopgain SNV	c.447delG
1	OR4F4	Exon1	frameshift insertion	c.75dupT
1	OR4F6	Exon1	frameshift insertion	c.684dupA
1	OR4F6	Exon1	frameshift deletion	c.912delG
1	OR4L1	Exon1	frameshift deletion	c.259_260delAC
3	OR4L1	Exon1	frameshift	c.399delG

			deletion	
1	OR4M2	Exon1	frameshift insertion	c.239_242dupAAAT
10	OR4M2	Exon1	stopgain SNV	c.382C>T
1	OR4M2	Exon1	frameshift deletion	c.455delG
1	OR4N2	Exon1	frameshift deletion	c.444delG
3	OR4N2	Exon1	frameshift insertion	c.701dupA
1	OR4N4	Exon1	frameshift deletion	c.31_32delGA
8	OR4N4	Exon1	frameshift insertion	c.140dupT
2	OR4N4	Exon1	stopgain SNV	c.271delG
3	OR4Q3	Exon1	stopgain SNV	c.478C>T
2	OR4S2	Exon1	stopgain SNV	c.285C>A
1	OR51B2	Exon1	frameshift deletion	c.316delT
1	OR51B5	Exon5	stopgain SNV	c.292C>T
1	OR51F1	Exon1	stopgain SNV	c.762C>A
1	OR51G1	Exon1	stopgain SNV	c.957G>A
1	OR51G1	Exon1	stopgain SNV	c.304C>T
8	OR51G1	Exon1	frameshift deletion	c.212_213delCA
16	OR51I1	Exon1	stopgain SNV	c.43C>T
1	OR51I2	Exon1	frameshift deletion	c.237delC
1	OR51I2	Exon1	frameshift deletion	c.440delG
11	OR51I2	Exon1	frameshift deletion	c.923delA
1	OR51M1	Exon1	stopgain SNV	c.141C>G
1	OR51S1	Exon1	stopgain SNV	c.86C>A
4	OR51T1	Exon1	frameshift insertion	c.625_626insACCACCCC
2	OR51V1	Exon1	frameshift deletion	c.489_492delCTTT
1	OR52A1	Exon1	frameshift deletion	c.814delT
1	OR52B2	Exon1	frameshift deletion	c.581delT
1	OR52B2	Exon1	frameshift insertion	c.414_415insC
1	OR52B2	Exon1	frameshift insertion	c.413_414insG
1	OR52E6	Exon1	frameshift insertion	c.30_31dupTA
1	OR52E8	Exon1	stopgain SNV	c.913C>T

1	OR52H1	Exon1	stopgain SNV	c.475C>T
1	OR52I2	Exon1	frameshift deletion	c.419delT
4	OR52I2	Exon1	frameshift deletion	c.523_529delAGTATGG
6	OR52J3	Exon1	stopgain SNV	c.907C>T
1	OR52K1	Exon1	frameshift deletion	c.101delG
1	OR52K1	Exon1	frameshift deletion	c.105_106delTT
2	OR52K1	Exon1	stopgain SNV	c.514C>T
2	OR52K2	Exon1	frameshift insertion	c.798dupA
20	OR52K2	Exon1	stopgain SNV	c.934A>T
1	OR52M1	Exon1	frameshift deletion	c.41delT
3	OR52M1	Exon1	frameshift insertion	c.739_740dupCA
1	OR52N1	Exon1	frameshift deletion	c.277delG
1	OR52N2	Exon1	frameshift deletion	c.732_733delAT
1	OR52N4	Exon1	stopgain SNV	c.907C>T
1	OR52N5	Exon1	frameshift deletion	c.213delT
1	OR52W1	Exon1	frameshift insertion	c.105dupC
1	OR56A3	Exon1	stopgain SNV	c.80G>A
1	OR56B1	Exon1	frameshift deletion	c.429_432delAATT
1	OR5A2	Exon1	stopgain SNV	c.766G>T
1	OR5AC2	Exon1	stopgain SNV	c.64C>T
5	OR5AC2	Exon1	frameshift deletion	c.283delT
4	OR5AC2	Exon1	frameshift insertion	c.692dupA
1	OR5AN1	Exon1	frameshift deletion	c.524delT
1	OR5AR1	Exon1	frameshift deletion	c.908delA
3	OR5B12	Exon1	frameshift deletion	c.589delA
3	OR5B17	Exon1	stopgain SNV	c.64C>T
1	OR5D14	Exon1	frameshift deletion	c.110_111delAT
5	OR5D16	Exon1	frameshift deletion	c.585_589delTCTCA
1	OR5H14	Exon1	stopgain SNV	c.654C>A
7	OR5H15	Exon1	frameshift deletion	c.307delT
4	OR5H15	Exon1	frameshift insertion	c.782dupG

4	OR5H15	Exon1	stopgain SNV	c.916A>T
1	OR5H1	Exon1	stopgain SNV	c.221C>A
1	OR5H1	Exon1	frameshift deletion	c.921delA
1	OR5H2	Exon1	frameshift deletion	c.590delC
2	OR5L2	Exon1	frameshift deletion	c.288delG
1	OR5L2	Exon1	stopgain SNV	c.479C>A
7	OR5M3	Exon1	stopgain SNV	c.397A>T
1	OR5M8	Exon1	frameshift deletion	c.18_22delGTTGG
2	OR5P2	Exon1	frameshift insertion	c.106_107insGCATCTAC
3	OR5P2	Exon1	frameshift insertion	c.103_104insA
1	OR5R1	Exon1	frameshift insertion	c.451_452dupTA
2	OR6A2	Exon1	frameshift deletion	c.650_651delCT
15	OR6C1	Exon1	frameshift insertion	c.23dupC
2	OR6C1	Exon1	frameshift insertion	c.27dupG
1	OR6C3	Exon1	frameshift deletion	c.498delT
1	OR6C4	Exon1	stopgain SNV	c.390C>A
9	OR6C4	Exon1	frameshift deletion	c.575_578delTCTT
2	OR6C68	Exon1	frameshift deletion	c.894delC
1	OR6C6	Exon1	stopgain SNV	c.845T>G
1	OR6C6	Exon1	stopgain SNV	c.599T>A
3	OR6C70	Exon1	frameshift deletion	c.858delT
1	OR6C76	Exon1	frameshift deletion	c.252_253delAG
3	OR6C76	Exon1	frameshift insertion	c.866dupT
2	OR6F1	Exon1	frameshift deletion	c.24_34delGCCCCAGGACT
1	OR6K2	Exon1	frameshift deletion	c.671_672delCT
3	OR6K2	Exon1	frameshift insertion	c.668_669insA
1	OR6K2	Exon1	frameshift deletion	c.367_368delCT
1	OR6Q1	Exon1	frameshift deletion	c.695_696delTC
1	OR7C1	Exon1	frameshift deletion	c.311delT
1	OR7G1	Exon1	frameshift deletion	c.737_738delCT
5	OR7G1	Exon1	frameshift deletion	c.279_280delTT

2	OR7G3	Exon1	stopgain SNV	c.658C>T
4	OR7G3	Exon1	stopgain SNV	c.364C>T
1	OR7G3	Exon1	stopgain SNV	c.349delA
1	OR8A1	Exon1	frameshift insertion	c.20dupT
1	OR8A1	Exon1	frameshift deletion	c.653delC
15	OR8B3	Exon1	frameshift insertion	c.550dupC
1	OR8B4	Exon1	frameshift deletion	c.98_101delGGAT
2	OR8D4	Exon1	frameshift insertion	c.311dupT
1	OR8D4	Exon1	stopgain SNV	c.723T>A
4	OR8G1	Exon1	frameshift deletion	c.197delT
1	OR8H2	Exon1	frameshift deletion	c.376delA
1	OR8H3	Exon1	frameshift insertion	c.221_222insT
10	OR8K3	Exon1	stopgain SNV	c.778C>T
1	OR8K3	Exon1	stopgain SNV	c.901C>T
1	OR8U1	Exon1	frameshift deletion	c.334delT
1	OR8U8	Exon2	stopgain SNV	c.810G>A
1	OR9A4	Exon1	frameshift deletion	c.418_419delAC
9	OR9K2	Exon1	frameshift deletion	c.34delA
1	OR9K2	Exon1	stopgain SNV	c.333G>A
1	OR9K2	Exon1	frameshift deletion	c.777delT
1	OR9Q1	Exon3	frameshift deletion	c.427_433delAGTCTTG
1	ORAI2	Exon4	stopgain SNV	c.367G>T
1	ORC1	Exon5	frameshift deletion	c._del
2	ORC4	Exon11	splicing	c.763-1_763-1delG
1	OSBPL10	Exon4	frameshift deletion	c.728_729delAG
1	OSBPL10	Exon4	frameshift deletion	c.639delC
1	OSBPL10	Exon4	frameshift deletion	c.634delG
1	OSBPL1A	Exon3	frameshift insertion	c.204dupG
2	OSBPL1A	Exon2	stopgain SNV	c.112_115dupAATT
1	OSBPL7	Exon11	frameshift insertion	c.941_942insA
15	OSBP	Exon13	stopgain SNV	c.2090C>G

1	OSGEP	Exon8	stopgain SNV	c.763C>T
1	OTOA	Exon13	splicing	c.1488+2T>A
1	OTOF	Exon39	frameshift deletion	c.4814delT
1	OTOF	Exon15	frameshift insertion	c.1701_1702insAGGA
1	OTOGL	Exon7	stopgain SNV	c.547C>T
15	OTOGL	Exon15	stopgain SNV	c.1494C>G
1	OTOGL	Exon55	splicing	c.6708+1G>T
1	OTOL1	Exon2	splicing	c.454+1G>A
1	OTOP2	Exon6	frameshift insertion	c.809_810insT
1	OTOP3	Exon7	stopgain SNV	c.1625G>A
4	OTUD4	Exon21	splicing	c.1889-1G>A
1	OTUD6B	Exon3	splicing	c.405+1_405+1delG
1	OVCH1	Exon18	frameshift deletion	c.1995delT
19	OVGP1	Exon11	frameshift insertion	c.1559_1560insA
1	OVOL2	Exon2	stopgain SNV	c.215C>A
2	OVOL2	Exon2	splicing	c.100+2T>C
1	OXA1L	Exon1	frameshift insertion	c.159dupA
3	OXGR1	Exon4	frameshift deletion	c.134delT
6	OXSM	Exon3	stoploss SNV	c.1378T>C
1	P2RX2	Exon11	frameshift deletion	c.1325_1335delCTGCCCTTCT
2	P2RX5	Exon11	stopgain SNV	c.1081C>T
3	P2RX6	Exon1	stopgain SNV	c.85A>T
4	P2RX7	Exon1	splicing	c.125+1G>T
1	P2RY11	Exon2	frameshift deletion	c.719_720delTG
1	P2RY11	Exon2	stopgain SNV	c.900C>G
2	P2RY13	Exon2	frameshift deletion	c.472delG
12	P2RY4	Exon1	stopgain SNV	c.1043G>A
4	P2RY4	Exon1	stopgain SNV	c.303G>A
1	P4HA2	Exon6	frameshift insertion	c.360_363dupGCAG
2	PABPC1	Exon8	stopgain SNV	c.1033G>T
1	PABPC1	Exon6	frameshift insertion	c.761_762insT
5	PABPC1	Exon3	frameshift insertion	c.467_468insG
1	PABPC3	Exon1	frameshift insertion	c.279_280insA

17	PABPC3	Exon1	frameshift insertion	c.761_762insT
6	PABPC3	Exon1	frameshift deletion	c.976_980delATGAT
8	PABPC3	Exon1	frameshift deletion	c.999delA
2	PABPC3	Exon1	frameshift deletion	c.1478delC
1	PADI1	Exon6	splicing	c.527-2A>T
1	PADI2	Exon14	stopgain SNV	c.1573C>T
1	PADI2	Exon9	stopgain SNV	c.1018C>T
1	PADI2	Exon2	splicing	c.92+1G>A
1	PADI4	Exon15	frameshift deletion	c.1748delT
1	PADI6	Exon12	frameshift deletion	c.1410delA
2	PAF1	Exon14	stopgain SNV	c.1549G>T
1	PAF1	Exon14	stopgain SNV	c.1405G>T
1	PAFAH1B1	Exon9	splicing	c.1002+1G>A
1	PAFAH2	Exon3	frameshift insertion	c.221dupG
1	PAFAH2	Exon2	frameshift deletion	c.2delT
2	PAH	Exon13	splicing	c.1315+1G>A
1	PALB2	Exon5	frameshift deletion	c.2167_2168delAT
1	PALB2	Exon4	frameshift deletion	c.1479delC
1	PALB2	Exon4	stopgain SNV	c.1240C>T
1	PALB2	Exon4	frameshift insertion	c.758dupT
1	PALLD	Exon18	frameshift deletion	c.2984delA
1	PANX1	Exon4	stopgain SNV	c.898C>T
1	PANX3	Exon4	frameshift deletion	c.1042_1043delGT
1	PAPD7	Exon10	frameshift insertion	c.1002dupG
1	PAPLN	Exon6	stopgain SNV	c.360delC
1	PAPLN	Exon19	frameshift insertion	c.2646_2647insG
3	PAPLN	Exon21	splicing	c.2906-2_2906-1delAG
1	PAPOLB	Exon1	frameshift deletion	c.1418delT
1	PAPPA2	Exon15	frameshift deletion	c.4175_4176delAG
1	PAPSS1	Exon3	stopgain SNV	c.331C>T
1	PAQR6	Exon7	frameshift deletion	c.751_752delGC
1	PARD3	Exon24	stopgain SNV	c.3865G>T

2	PARD3	Exon21	splicing	c.3027-2A>G
1	PARD6B	Exon2	frameshift deletion	c.236delA
1	PARK7	Exon2	frameshift deletion	c.9_10delCA
1	PARK7	Exon2	frameshift deletion	c.16_17delGC
1	PARP11	Exon4	frameshift deletion	c.282delG
1	PARP16	Exon2	stopgain SNV	c.275C>A
1	PARP1	Exon19	frameshift insertion	c.2538_2539insA
1	PARP2	Exon7	stopgain SNV	c.571C>T
1	PARP3	Exon8	stopgain SNV	c.1018C>T
1	PARP3	Exon11	stopgain SNV	c.1441C>T
1	PARP4	Exon32	splicing	c.3667-1G>A
1	PARP4	Exon31	splicing	c.3544-1G>A
1	PARP4	Exon22	frameshift deletion	c.2567_2571delGCATG
1	PARP4	Exon5	splicing	c.335-1G>C
1	PARP8	Exon2	frameshift deletion	c.88delG
1	PASK	Exon9	stopgain SNV	c.1351C>T
1	PASK	Exon6	frameshift insertion	c.791dupT
1	PATE1	Exon4	stopgain SNV	c.139C>T
16	PATE4	Exon2	splicing	c.59-2A>C
10	PATZ1	Exon5	frameshift deletion	c.1912delG
1	PAX6	Exon5	frameshift deletion	c.137_138delTG
1	PAX8	Exon4	frameshift insertion	c.373_374insC
5	PBLD	Exon9	frameshift deletion	c.741delG
1	PBLD	Exon2	frameshift deletion	c.38_41delCAAG
1	PBX3	Exon7	frameshift deletion	c.1060delA
1	PBX4	Exon5	stopgain SNV	c.711C>G
1	PCCA	Exon23	frameshift insertion	c.2020_2021insGA
1	PCDH15	Exon8	stopgain SNV	c.733C>T
1	PCDH15	Exon6	splicing	c.319-2A>T
1	PCDH20	Exon2	frameshift deletion	c.1959delA
2	PCDHA11	Exon1	frameshift insertion	c.535dupT
2	PCDHA12	Exon1	stopgain SNV	c.1827C>A
2	PCDHA13	Exon1	frameshift	c.398dupT

			insertion	
2	PCDHA13	Exon1	frameshift insertion	c.650_651insC
1	PCDHA2	Exon1	frameshift insertion	c.2295dupC
12	PCDHA3	Exon1	frameshift deletion	c.526_529delGAAT
1	PCDHA4	Exon1	frameshift insertion	c.128_129insTA
1	PCDHA9	Exon1	stopgain SNV	c.2266C>T
1	PCDHAC1	Exon1	stopgain SNV	c.766C>T
1	PCDHB10	Exon1	frameshift deletion	c.282_283delGC
1	PCDHB10	Exon1	frameshift deletion	c.1671delC
1	PCDHB10	Exon1	stopgain SNV	c.1894G>T
1	PCDHB11	Exon1	frameshift insertion	c.390dupT
1	PCDHB13	Exon1	frameshift deletion	c.1578delG
1	PCDHB14	Exon1	stopgain SNV	c.28C>T
1	PCDHB14	Exon1	frameshift deletion	c.859delG
1	PCDHB14	Exon1	frameshift deletion	c.1766delT
1	PCDHB16	Exon1	frameshift deletion	c.817delG
1	PCDHB1	Exon1	stopgain SNV	c.1805G>A
3	PCDHB3	Exon1	frameshift deletion	c.1737_1749del GGCTGAGCCGGGC
1	PCDHB4	Exon1	frameshift insertion	c.230_231insC
1	PCDHB4	Exon1	frameshift deletion	c.335delC
1	PCDHB4	Exon1	frameshift deletion	c.1079_1080delCT
7	PCDHB6	Exon1	frameshift deletion	c.1337delT
1	PCDHB7	Exon1	frameshift deletion	c.486delT
9	PCDHB7	Exon1	stopgain SNV	c.1894G>T
1	PCDHB8	Exon1	frameshift deletion	c.856_857delTT
1	PCDHB9	Exon1	frameshift insertion	c.1142dupC
2	PCDHGA11	Exon1	frameshift deletion	c.467delC
2	PCDHGA11	Exon1	frameshift deletion	c.487delG
2	PCDHGA11	Exon1	frameshift insertion	c.1444dupA
2	PCDHGA11	Exon1	frameshift deletion	c.2116delC
1	PCDHGA2	Exon1	stopgain SNV	c.881_884dupTTAA

1	PCDHGA2	Exon1	frameshift deletion	c.985delA
1	PCDHGA3	Exon1	stopgain SNV	c.577G>T
1	PCDHGA3	Exon1	frameshift insertion	c.1441_1444dupAGCA
1	PCDHGA5	Exon1	frameshift deletion	c.488delG
1	PCDHGB1	Exon1	frameshift insertion	c.1337_1338insCG
1	PCDHGB3	Exon1	frameshift deletion	c.170delG
1	PCDHGB3	Exon1	frameshift deletion	c.1577delG
1	PCDHGB6	Exon1	frameshift deletion	c.1400delC
1	PCDHGC5	Exon1	stopgain SNV	c.179T>A
1	PCDHGC5	Exon1	frameshift insertion	c.1736_1737insG
1	PCGF1	Exon8	frameshift deletion	c.719delG
7	PCGF1	Exon8	frameshift deletion	c.718delC
1	PCGF1	Exon6	frameshift insertion	c.558_559insA
1	PCIF1	Exon17	frameshift insertion	c.2031_2032insA
1	PCK1	Exon5	frameshift deletion	c.611delA
4	PCK2	Exon2	stopgain SNV	c.68C>G
1	PCK2	Exon5	frameshift insertion	c.707_708insA
1	PCK2	Exon5	frameshift deletion	c.780delC
1	PCK2	Exon7	splicing	c.1234+1G>T
1	PCK2	Exon9	frameshift deletion	c.1446delC
1	PCNT	Exon10	stopgain SNV	c.1624C>T
1	PCNT	Exon39	frameshift deletion	c.8873delG
1	PCNT	Exon46	frameshift deletion	c.9911_9912delCA
1	PCNXL2	Exon5	frameshift insertion	c.1084_1085insA
1	PCNX	Exon6	frameshift deletion	c.1053delG
1	PCOLCE2	Exon5	stopgain SNV	c.610C>T
2	PCOLCE	Exon8	frameshift insertion	c.1173dupC
1	PCSK1	Exon5	stopgain SNV	c.595C>T
1	PCSK4	Exon4	stopgain SNV	c.421C>T
1	PCSK5	Exon36	frameshift deletion	c.5010_5011delAA
8	PDAP1	Exon3	frameshift deletion	c.165delG

2	PDCD11	Exon13	splicing	c.1770+2T>G
1	PDCD11	Exon33	stopgain SNV	c.5047C>T
3	PDCD1LG2	Exon2	frameshift deletion	c.31delG
1	PDCD1LG2	Exon5	frameshift deletion	c.661delT
1	PDCD2L	Exon5	splicing	c.687-1G>A
1	PDCD5	Exon3	stopgain SNV	c.152C>A
1	PDCD6IP	Exon4	frameshift deletion	c.393_394delTA
1	PDCD6IP	Exon17	splicing	c.2432+2T>C
1	PDE11A	Exon19	splicing	c.1674-1G>C
1	PDE11A	Exon10	frameshift deletion	c.910delT
1	PDE11A	Exon9	stopgain SNV	c.883C>T
4	PDE11A	Exon3	stopgain SNV	c.169C>T
1	PDE11A	Exon2	stopgain SNV	c.58A>T
2	PDE11A	Exon2	frameshift deletion	c.20_21delGA
4	PDE3B	Exon12	stopgain SNV	c.2347C>T
1	PDE4B	Exon2	stopgain SNV	c.4A>T
1	PDE4B	Exon4	frameshift insertion	c.335_336insA
1	PDE4DIP	Exon30	frameshift insertion	c.3823dupC
1	PDE4DIP	Exon28	splicing	c.3336-2A>T
1	PDE4DIP	Exon18	stopgain SNV	c.2200C>T
3	PDE5A	Exon21	stopgain SNV	c.2578C>T
1	PDE6B	Exon12	frameshift deletion	c.1554_1557delATGT
1	PDGFRB	Exon12	stopgain SNV	c.1778G>A
1	PDGFRB	Exon7	frameshift deletion	c.970delA
2	PDIA2	Exon4	stopgain SNV	c.583C>T
1	PDIA2	Exon6	splicing	c.796-1G>A
1	PDIA6	Exon5	frameshift deletion	c.385_388delAGTG
1	PDLIM2	Exon7	frameshift deletion	c.703_704delGG
1	PDP2	Exon2	frameshift deletion	c.1117delC
1	PDPR	Exon18	stopgain SNV	c.2140C>T
13	PDSS2	Exon2	frameshift deletion	c.377delG
1	PDSS2	Exon2	frameshift deletion	c.365delC
1	PDX1	Exon2	stopgain	c.554T>A

			SNV	
1	PDXDC1	Exon6	frameshift insertion	c.507dupA
1	PDZD2	Exon19	frameshift deletion	c.4226delA
2	PDZD2	Exon19	frameshift deletion	c.4248delA
1	PDZD2	Exon19	frameshift deletion	c.5987delG
1	PDZD3	Exon4	frameshift deletion	c.162_163delAA
1	PDZD7	Exon2	frameshift deletion	c.42delA
1	PDZD7	Exon2	frameshift insertion	c.39_40insTG
2	PDZD9	Exon3	frameshift deletion	c.279delT
1	PDZK1	Exon8	frameshift deletion	c.1442delC
1	PDZRN3	Exon10	frameshift insertion	c.2462_2463insGA
2	PDZRN3	Exon9	splicing	c.1417-2dupA
1	PEG3	Exon10	frameshift deletion	c.3501delG
1	PELI1	Exon5	frameshift insertion	c.326_327insAC
1	PELP1	Exon17	frameshift deletion	c.3350_3351delCT
1	PENK	Exon4	frameshift deletion	c.489_490delAG
1	PENK	Exon4	frameshift deletion	c.280delC
1	PER1	Exon18	frameshift insertion	c.2360_2361insGC
1	PER1	Exon11	stopgain SNV	c.1366_1367insAGC
1	PER2	Exon16	frameshift insertion	c.1875_1876insAG
2	PER2	Exon13	stopgain SNV	c.1446C>A
6	PER3	Exon15	splicing	c.1760-1G>A
1	PET112	Exon6	stopgain SNV	c.818T>A
1	PEX11G	Exon2	stopgain SNV	c.225dupT
1	PEX12	Exon3	frameshift deletion	c.888_889delCT
4	PEX1	Exon5	frameshift deletion	c.1108delA
1	PEX6	Exon11	frameshift insertion	c.2204dupT
1	PFAS	Exon13	stopgain SNV	c.1456C>T
1	PFAS	Exon21	frameshift insertion	c.2584dupC
1	PFKFB1	Exon9	frameshift deletion	c.877delT
1	PFKFB1	Exon7	frameshift deletion	c.526_529delCTTG
1	PFKFB4	Exon11	frameshift	c.1185_1186insAT

			insertion	
1	PFKP	Exon17	frameshift insertion	c.1785dupG
1	PGD	Exon5	splicing	c.449+1G>A
1	PGK1	Exon3	frameshift insertion	c.187_188insAG
1	PGK2	Exon1	frameshift deletion	c.1118delG
1	PGLYRP1	Exon3	stoploss SNV	c.588dupC
1	PGLYRP4	Exon6	stopgain SNV	c.557dupA
1	PGM2	Exon12	stopgain SNV	c.1422C>A
1	PGM2	Exon14	stoploss SNV	c.1837T>A
1	PGM3	Exon12	frameshift deletion	c.1438_1442delCTTAA
2	PGPEP1L	Exon5	frameshift insertion	c.328dupA
1	PGS1	Exon6	frameshift deletion	c.826delC
2	PHACTR4	Exon3	frameshift deletion	c.160delA
1	PHB	Exon5	frameshift insertion	c.445dupC
15	PHC3	Exon8	frameshift deletion	c.1546delC
1	PHF13	Exon3	frameshift insertion	c.423dupG
1	PHF15	Exon9	frameshift insertion	c.1348_1349insC
1	PHF15	Exon11	frameshift deletion	c.2066delC
1	PHF15	Exon11	frameshift insertion	c.2189dupG
1	PHF15	Exon11	frameshift insertion	c.2190_2191insG
5	PHF21A	Exon17	frameshift deletion	c._del
1	PHF7	Exon10	splicing	c.803-2_803-1dupCA
1	PHGDH	Exon2	frameshift deletion	c.171delC
11	PHGDH	Exon3	splicing	c.356+2T>A
1	PHKA1	Exon17	frameshift deletion	c.1744delA
1	PHKA1	Exon16	frameshift deletion	c.1656_1660delCCGCT
1	PHKA1	Exon12	stopgain SNV	c.1189A>T
1	PHKB	Exon1	stopgain SNV	c.39G>A
1	PHLDB1	Exon7	frameshift deletion	c.1700delT
1	PHLDB2	Exon3	stopgain SNV	c.928C>T
2	PHLPP2	Exon17	frameshift deletion	c.2691delT
1	PHTF1	Exon13	stopgain SNV	c.1771A>T

14	PHTF1	Exon10	stopgain SNV	c.1181C>A
1	PHYHD1	Exon4	stopgain SNV	c.112G>T
1	PHYHIP	Exon4	frameshift deletion	c.369delT
1	PI15	Exon2	stopgain SNV	c.226C>T
5	PI4KA	Exon40	splicing	c.4682+2T>G
7	PI4KB	Exon11	frameshift deletion	c.2304delG
1	PIEZO2	Exon40	frameshift deletion	c.6111delC
1	PIEZO2	Exon40	frameshift deletion	c.6106_6107delCA
1	PIGM	Exon1	frameshift deletion	c.1254_1257delGAGA
1	PIGN	Exon21	stopgain SNV	c.2011C>T
3	PIGU	Exon5	frameshift deletion	c.328delC
1	PIK3C2A	Exon18	stopgain SNV	c.3145C>T
1	PIK3C2B	Exon34	frameshift deletion	c.4897delA
1	PIK3C2B	Exon13	frameshift deletion	c.2005delC
1	PIK3C2G	Exon9	frameshift deletion	c.1342_1345delCAAA
14	PIK3C2G	Exon11	stopgain SNV	c.1433T>A
2	PIK3C2G	Exon11	splicing	c.1625+1G>A
1	PIK3C2G	Exon18	frameshift deletion	c.2504delT
2	PIK3C2G	Exon24	frameshift deletion	c.3263delA
1	PIK3C2G	Exon24	splicing	c.3357+1_3357+1delG
1	PIK3C2G	Exon26	frameshift deletion	c.3478_3482delGAAAG
3	PIK3C2G	Exon26	splicing	c.3657+1G>A
1	PIK3C2G	Exon29	frameshift deletion	c.3936_3939delAGTT
8	PIK3C2G	Exon32	stoploss SNV	c.4337G>C
11	PIK3C3	Exon9	stopgain SNV	c.934G>T
1	PIK3CD	Exon4	frameshift insertion	c.237dupG
6	PIK3R3	Exon8	splicing	c.764+2dupT
1	PIK3R4	Exon15	frameshift deletion	c.3333_3342delTCTTGCCTAT
2	PIK3R6	Exon21	splicing	c.2108-1G>A
1	PIK3R6	Exon19	stopgain SNV	c.2017C>T
9	PIK3R6	Exon6	splicing	c.258+1G>C
1	PIKFYVE	Exon10	stopgain SNV	c.1213C>T
10	PIM2	Exon6	splicing	c.772+2T>G

1	PION	Exon5	frameshift deletion	c.363_366delACCA
1	PIP	Exon3	frameshift insertion	c.220dupA
1	PIR	Exon7	frameshift deletion	c.601delG
1	PITRM1	Exon27	stopgain SNV	c.3112C>T
1	PIWIL2	Exon5	frameshift deletion	c.614delC
1	PIWIL3	Exon19	stopgain SNV	c.2290C>T
1	PIWIL3	Exon16	stopgain SNV	c.1984C>T
7	PIWIL3	Exon16	splicing	c.1932+1G>A
3	PIWIL3	Exon3	frameshift deletion	c.106delC
2	PKD1L1	Exon51	stopgain SNV	c.7663C>T
1	PKD1L1	Exon43	splicing	c.6473+2_6473+3delTG
1	PKD1L1	Exon42	stopgain SNV	c.6396G>A
1	PKD1L1	Exon34	frameshift deletion	c.5444delA
2	PKD1L2	Exon36	frameshift insertion	c.6241_6242ins GCTTTCCCCAGGCTTGGCAGTA
3	PKD1L2	Exon31	stoploss SNV	c.5341T>C
1	PKD1L2	Exon31	splicing	c.4972-1G>C
1	PKD1L2	Exon27	splicing	c.4228-2A>T
14	PKD1L3	Exon15	stopgain SNV	c.2365C>T
1	PKD1L3	Exon1	stopgain SNV	c.256delG
9	PKD2L1	Exon7	stopgain SNV	c.1219C>T
1	PKD2	Exon7	frameshift deletion	c.1624_1625delCA
1	PKHD1L1	Exon13	stopgain SNV	c.1069G>T
1	PKHD1L1	Exon25	frameshift deletion	c.2866delG
1	PKHD1L1	Exon38	stopgain SNV	c.4851T>A
13	PKHD1L1	Exon42	splicing	c.6507+1G>A
17	PKHD1L1	Exon47	splicing	c.7246+1G>C
3	PKHD1L1	Exon49	stopgain SNV	c.8005C>T
1	PKHD1L1	Exon73	stopgain SNV	c.11932delA
4	PKHD1	Exon32	stopgain SNV	c.3848C>G
1	PKHD1	Exon32	frameshift deletion	c.3766delC
1	PKHD1	Exon23	stopgain SNV	c.2341C>T
1	PKHD1	Exon19	stopgain SNV	c.1774C>T
3	PKHD1	Exon13	frameshift	c.930delC

			deletion	
1	PKHD1	Exon5	frameshift deletion	c.353delG
1	PKM2	Exon5	splicing	c.172-1G>A
1	PKN3	Exon16	frameshift insertion	c.1983_1984insTG
1	PKP1	Exon13	frameshift deletion	c.2086_2087delGC
2	PKP4	Exon5	splicing	c.412+1G>T
1	PLA2G2E	Exon3	splicing	c.41-11_41-6delCCTCTC
7	PLA2G3	Exon1	frameshift insertion	c.206dupA
9	PLA2G4C	Exon11	frameshift deletion	c.893delC
2	PLA2G4D	Exon8	splicing	c.472-1G>A
5	PLA2G4D	Exon3	splicing	c.46-2_46-2delA
3	PLA2G4F	Exon20	frameshift deletion	c.2472_2473delGA
1	PLA2G4F	Exon20	stopgain SNV	c.2458C>T
1	PLA2G7	Exon9	stopgain SNV	c.859C>T
1	PLA2R1	Exon18	splicing	c.2438-2A>G
2	PLA2R1	Exon13	stopgain SNV	c.2171C>A
4	PLA2R1	Exon12	frameshift deletion	c.1957delG
1	PLAC1L	Exon2	splicing	c.243+1G>T
1	PLAC4	Exon1	frameshift deletion	c.284delG
9	PLAT	Exon7	frameshift deletion	c.643delC
1	PLB1	Exon38	frameshift insertion	c.2609dupA
1	PLCB2	Exon23	frameshift insertion	c.2520dupG
1	PLCB2	Exon23	frameshift deletion	c.2516delG
1	PLCB3	Exon31	frameshift insertion	c.3623_3624insT
1	PLCB3	Exon31	frameshift insertion	c.3626_3627insT
1	PLCD3	Exon6	frameshift deletion	c.999_1009delGTGTGTGTTCC
1	PLCD4	Exon12	frameshift deletion	c.1633delT
1	PLCL1	Exon5	frameshift deletion	c.3072_3073delTG
4	PLCL2	Exon3	frameshift deletion	c.687delG
1	PLCL2	Exon3	stopgain SNV	c.895C>T
1	PLEC	Exon33	frameshift insertion	c.9118_9119insC
1	PLEC	Exon33	frameshift deletion	c.8935delG
1	PLEC	Exon16	frameshift insertion	c.1895_1896insC

1	PLEK2	Exon5	stopgain SNV	c.595C>T
10	PLEKHA1	Exon5	stopgain SNV	c.259delA
1	PLEKHA1	Exon12	frameshift deletion	c.1013_1016delCCAT
1	PLEKHA8	Exon4	frameshift deletion	c.394_398delGATAA
1	PLEKHB2	Exon7	stopgain SNV	c.447C>G
1	PLEKHF1	Exon2	frameshift deletion	c.371delG
1	PLEKHG1	Exon17	frameshift deletion	c.3615delG
1	PLEKHG2	Exon18	splicing	c.2599+1G>A
1	PLEKHG2	Exon19	frameshift insertion	c.4083dupT
1	PLEKHG4B	Exon11	frameshift deletion	c.1918delA
1	PLEKHG4	Exon3	stopgain SNV	c.654G>A
1	PLEKHG5	Exon20	frameshift deletion	c.2395delG
1	PLEKHG5	Exon20	frameshift deletion	c.2391_2392delGG
1	PLEKHG6	Exon4	frameshift deletion	c.373delG
1	PLEKHG6	Exon4	frameshift deletion	c.405delC
1	PLEKHH1	Exon16	frameshift deletion	c.2197_2198delGA
8	PLEKHH1	Exon29	stopgain SNV	c.4042C>T
1	PLEKHH2	Exon17	stopgain SNV	c.2632C>T
1	PLEKHH2	Exon30	frameshift insertion	c.4337dupA
1	PLEKHH3	Exon13	frameshift insertion	c.2250dupC
4	PLEKHM2	Exon3	frameshift insertion	c.256dupG
1	PLIN4	Exon3	frameshift deletion	c.1346_1347delCT
1	PLIN4	Exon3	frameshift deletion	c.1328_1344del CCACCAAGATCGTTCTA
1	PLIN4	Exon3	frameshift deletion	c.932_950del CCAGTAAGACTGTCCTAAC
1	PLIN4	Exon3	frameshift deletion	c.833_851del CCAGTAAGACTGTCCTAAC
2	PLK1S1	Exon3	stopgain SNV	c.226C>T
14	PLK1S1	Exon7	frameshift insertion	c.1384dupA
1	PLK1S1	Exon8	stopgain SNV	c.1450C>T
1	PLK3	Exon8	frameshift deletion	c.1051delC
1	PLK3	Exon9	frameshift insertion	c.1096dupG
7	PLOD3	Exon11	splicing	c.1127+1G>A

1	PLOD3	Exon8	frameshift insertion	c.876dupG
1	PLS1	Exon16	stopgain SNV	c.1774C>T
2	PLSCR1	Exon4	stopgain SNV	c.117C>A
1	PLSCR5	Exon4	stopgain SNV	c.385C>T
11	PLSCR5	Exon2	frameshift deletion	c.68delC
2	PLXDC2	Exon9	stopgain SNV	c.1043G>A
1	PLXNA1	Exon8	frameshift deletion	c.2072delC
1	PLXNA2	Exon20	frameshift insertion	c.3685dupA
1	PLXNA2	Exon2	frameshift insertion	c.92dupC
1	PLXNB3	Exon30	frameshift deletion	c.5084_5085delGT
1	PM20D1	Exon11	frameshift insertion	c.1254dupC
1	PM20D1	Exon11	frameshift deletion	c.1149_1153delTAACA
1	PMEL	Exon10	frameshift deletion	c.1593delA
1	PMEL	Exon10	frameshift deletion	c.1589delC
1	PMEL	Exon7	frameshift deletion	c.937delC
1	PMEL	Exon7	stopgain SNV	c.727C>T
1	PMF1	Exon1	frameshift deletion	c.103_106delGTGA
1	PMF1	Exon4	stopgain SNV	c.427C>T
1	PMFBP1	Exon21	frameshift deletion	c.2460_2464delGAAGA
1	PMFBP1	Exon20	stopgain SNV	c.2290C>T
1	PML	Exon2	frameshift deletion	c.409delG
1	PML	Exon2	frameshift deletion	c.410delA
1	PML	Exon2	stopgain SNV	c.415_416insA
1	PMS1	Exon9	frameshift deletion	c.1472delC
1	PMS2	Exon13	frameshift deletion	c.2186_2187delTC
1	PMVK	Exon4	stopgain SNV	c.331A>T
1	PNCK	Exon10	stopgain SNV	c.1108C>T
1	PNCK	Exon8	frameshift insertion	c.873_874insCA
2	PNLDC1	Exon17	stopgain SNV	c.1282A>T
1	PNLIPRP1	Exon5	stopgain SNV	c.374G>A
1	PNLIPRP1	Exon6	frameshift insertion	c.485dupC

4	PNLIPRP2	Exon3	frameshift insertion	c.59dupA
16	PNLIPRP2	Exon6	stoploss SNV	c.476A>G
1	PNLIPRP3	Exon3	stopgain SNV	c.321C>A
1	PNLIPRP3	Exon9	frameshift deletion	c.1010_1011delCT
1	PNMT	Exon2	frameshift insertion	c.325_326insGT
4	PNMT	Exon3	stopgain SNV	c.744C>A
12	PNPLA1	Exon7	stopgain SNV	c.1179T>A
1	PNPLA7	Exon25	frameshift insertion	c.2835_2836insCC
1	PNPLA7	Exon24	stopgain SNV	c.2728C>T
2	PNPLA7	Exon1	frameshift insertion	c.22dupA
1	PODXL2	Exon3	frameshift deletion	c.901delG
1	POF1B	Exon11	stopgain SNV	c.1130T>A
1	POF1B	Exon5	stopgain SNV	c.499G>T
1	POFUT1	Exon1	frameshift insertion	c.88dupG
1	POLD1	Exon17	frameshift deletion	c.2041delC
1	POLDIP2	Exon1	frameshift insertion	c.83dupG
1	POLDIP3	Exon2	frameshift deletion	c.168_169delCC
1	POLE2	Exon17	frameshift insertion	c.1406dupT
1	POLE2	Exon15	splicing	c.1133+1G>T
1	POLE	Exon48	splicing	c.6532-1G>C
1	POLE	Exon26	splicing	c.3060+2T>G
7	POLE	Exon13	frameshift deletion	c.1288delG
4	POLG2	Exon8	stopgain SNV	c.1442C>A
4	POLG2	Exon1	frameshift deletion	c.455delC
1	POLG	Exon10	splicing	c.1712+2T>G
6	POLI	Exon5	stopgain SNV	c.740T>G
2	POLK	Exon10	frameshift deletion	c.1243delA
1	POLK	Exon13	stopgain SNV	c.1714C>T
3	POLN	Exon23	frameshift deletion	c.2509delC
1	POLN	Exon12	stopgain SNV	c.1609C>T
1	POLQ	Exon23	splicing	c.6544-2A>G
8	POLQ	Exon6	splicing	c.740+2T>C
1	POLR1E	Exon12	frameshift	c.1219_1220delCC

			deletion	
3	POLR2A	Exon25	frameshift deletion	c.4234delA
3	POLR2I	Exon6	stoploss SNV	c.376T>A
4	POLR2J2	Exon3	splicing	c.140+1G>T
1	POLR3A	Exon13	frameshift deletion	c.1737delT
1	POLR3A	Exon2	stopgain SNV	c.126C>G
1	POLR3C	Exon15	frameshift deletion	c.1533delC
1	POLR3D	Exon5	frameshift deletion	c.378_379delAG
1	POLR3F	Exon5	frameshift deletion	c.401delA
2	POLR3F	Exon6	frameshift deletion	c.482delT
1	POLR3G	Exon7	frameshift insertion	c.451dupA
2	POM121L12	Exon1	stopgain SNV	c.148C>T
1	POM121L2	Exon1	stopgain SNV	c.490A>T
1	POMGNT1	Exon16	frameshift deletion	c.1393_1394delAA
1	POMGNT1	Exon2	frameshift insertion	c.2_3insCA
1	POMT1	Exon13	splicing	c.1176-2A>G
1	POMT1	Exon19	frameshift insertion	c.1967_1968insGGCA
1	PON2	Exon4	frameshift deletion	c.286delA
1	POP1	Exon16	frameshift deletion	c.2993_2994delCT
1	POP5	Exon4	stoploss SNV	c.340T>G
2	POTEA	Exon2	splicing	c.300-1G>C
4	POTEA	Exon7	stopgain SNV	c.926C>A
1	POTEA	Exon9	stopgain SNV	c.1036C>T
1	POTEA	Exon10	frameshift deletion	c.1188delG
1	POTEA	Exon12	stopgain SNV	c.1376C>G
1	POTEH	Exon5	splicing	c.1028+1_1028+2dupGT
7	POTEH	Exon1	stopgain SNV	c.102G>A
1	POU1F1	Exon3	splicing	c.214+1G>T
1	POU4F2	Exon2	frameshift deletion	c.1096delA
1	POU6F1	Exon4	frameshift deletion	c.323delA
1	POU6F2	Exon3	stopgain SNV	c.82G>T
2	PPAN-P2RY11	Exon4	frameshift deletion	c.304delC
1	PPARGC1B	Exon4	frameshift	c.687_688delAG

			deletion	
1	PPCDC	Exon4	frameshift deletion	c.327delG
2	PPEF2	Exon12	frameshift insertion	c.1335dupG
3	PPEF2	Exon11	stopgain SNV	c.1021C>T
8	PPFIA3	Exon8	splicing	c.1026+2T>G
4	PPFIA3	Exon29	frameshift deletion	c.3577delT
10	PPIC	Exon2	frameshift deletion	c.148delG
1	PPID	Exon4	frameshift deletion	c.437_438delAT
1	PPIE	Exon8	stopgain SNV	c.553A>T
1	PPIL2	Exon18	frameshift insertion	c.1274_1277dupAGAT
1	PPIP5K2	Exon6	stopgain SNV	c.685C>T
2	PPL	Exon22	stopgain SNV	c.3469A>T
1	PPM1F	Exon8	frameshift insertion	c.1102_1103insT
1	PPM1F	Exon2	frameshift deletion	c.134delC
1	PPM1G	Exon8	frameshift deletion	c.1309delG
1	PPM1G	Exon7	frameshift insertion	c.1088_1089insTT
1	PPM1G	Exon5	frameshift deletion	c.421delG
1	PPM1J	Exon7	frameshift deletion	c.1058delA
1	PPM1J	Exon7	splicing	c.1046+2T>G
2	PPM1M	Exon6	splicing	c.914+2T>G
1	PPP1R12A	Exon26	stoploss SNV	c.3091delT
1	PPP1R13B	Exon2	stopgain SNV	c.134T>G
2	PPP1R15A	Exon2	stopgain SNV	c.478G>T
1	PPP1R15A	Exon3	frameshift deletion	c.1951delC
1	PPP1R26	Exon4	frameshift insertion	c.1190_1191insC
1	PPP1R26	Exon4	frameshift deletion	c.2075_2076delAC
1	PPP1R26	Exon4	frameshift deletion	c.2083delA
1	PPP1R32	Exon7	splicing	c.575-1G>A
5	PPP1R3A	Exon4	frameshift deletion	c.1985_1986delAG
6	PPP1R3A	Exon4	frameshift deletion	c.1428delT
1	PPP1R42	Exon6	stoploss SNV	c.685T>C
1	PPP1R42	Exon6	splicing	c.552+1G>A
1	PPP2R3A	Exon13	stopgain	c.1142_1145dupATGA

			SNV	
2	PPP2R5D	Exon9	splicing	c.1026+1G>C
1	PPP6R3	Exon11	splicing	c.976-2A>T
1	PPRC1	Exon7	stopgain SNV	c.3605C>A
1	PQLC3	Exon6	splicing	c.476-2A>G
1	PQLC3	Exon7	frameshift deletion	c.563delC
1	PRAMEF10	Exon4	frameshift deletion	c.1075delT
2	PRAMEF11	Exon4	frameshift deletion	c.775delC
1	PRAMEF11	Exon3	frameshift deletion	c.633_634delGC
1	PRAMEF11	Exon3	frameshift deletion	c.630delA
4	PRAMEF11	Exon3	stopgain SNV	c.498T>A
1	PRAMEF12	Exon2	stopgain SNV	c.391C>T
13	PRAMEF1	Exon3	stopgain SNV	c.314T>A
8	PRAMEF2	Exon2	stopgain SNV	c.177G>A
1	PRAMEF4	Exon3	stopgain SNV	c.653G>A
1	PRAME	Exon6	frameshift deletion	c.1188delT
1	PRB4	Exon3	stopgain SNV	c.694C>T
1	PRB4	Exon3	stopgain SNV	c.325C>T
1	PRB4	Exon2	frameshift deletion	c.87_88delCT
1	PRC1	Exon14	frameshift deletion	c.1766_1767delCT
1	PRCP	Exon5	frameshift deletion	c.605delG
1	PRDM15	Exon6	frameshift deletion	c.741delG
1	PRDM4	Exon5	frameshift deletion	c.834delT
1	PRDM9	Exon11	stopgain SNV	c.1182T>A
1	PRDM9	Exon11	frameshift deletion	c.2176_2183delGGGCGGGG
1	PRDM9	Exon11	stopgain SNV	c.2664C>G
1	PREPL	Exon8	splicing	c.888+1G>A
1	PREX2	Exon6	frameshift deletion	c.553_565delAAGCGGACTCCAC
1	PRH1	Exon4	frameshift deletion	c.263_264delAG
1	PRIM2	Exon7	frameshift deletion	c.618delT
1	PRKAB1	Exon5	frameshift deletion	c.544delT
1	PRKACA	Exon10	frameshift insertion	c.953_954insT

1	PRKAR2A	Exon4	stopgain SNV	c.433C>T
1	PRKCG	Exon14	frameshift deletion	c.1485delG
1	PRKCG	Exon14	frameshift deletion	c.1490_1491delCT
5	PRKD3	Exon16	frameshift insertion	c.2376_2377insGG
1	PRKDC	Exon49	frameshift insertion	c.6580_6581insG
1	PRKDC	Exon5	frameshift deletion	c.496delA
1	PRKG1	Exon4	frameshift deletion	c.599delT
1	PRKG1	Exon5	frameshift deletion	c.700delG
7	PRKRA	Exon5	splicing	c.396+2_396+2delT
12	PRKRA	Exon5	splicing	c.318-2_318-2delA
1	PRMT6	Exon1	frameshift insertion	c.1107_1108insGGCG
8	PRMT7	Exon7	stopgain SNV	c.636C>A
16	PRODH	Exon5	stopgain SNV	c.554G>A
5	PROKR1	Exon2	stopgain SNV	c.651C>A
3	PROKR2	Exon1	frameshift deletion	c.58delC
1	PROM2	Exon15	frameshift insertion	c.1807dupC
1	PROX2	Exon3	frameshift deletion	c.1500delG
1	PROZ	Exon6	splicing	c.573+1G>C
1	PROZ	Exon7	frameshift deletion	c.672delG
1	PRPF31	Exon10	splicing	c.1073+1G>A
1	PRPF40B	Exon24	frameshift deletion	c.2448delT
1	PRPF8	Exon38	frameshift insertion	c.6198_6199insGT
1	PRPF8	Exon38	frameshift insertion	c.6192_6193insTT
1	PRPF8	Exon33	stopgain SNV	c.5182C>T
12	PRPF8	Exon26	stopgain SNV	c.4066G>T
1	PRPF8	Exon20	frameshift deletion	c.2907delT
3	PRPH	Exon5	splicing	c.996+1G>A
4	PRPS1L1	Exon1	frameshift deletion	c.434_438delTGTAT
1	PRPS1L1	Exon1	frameshift deletion	c.336delT
1	PRPSAP1	Exon7	stopgain SNV	c.772G>T
1	PRR14	Exon11	frameshift deletion	c.1415delA
1	PRR19	Exon3	frameshift insertion	c.1001_1002insT

1	PRR19	Exon3	frameshift deletion	c.1008_1009delCT
1	PRR4	Exon3	stoploss SNV	c.404A>C
1	PRRC1	Exon6	frameshift deletion	c.828delC
1	PRRC2B	Exon21	frameshift deletion	c.5277_5278delGC
2	PRRC2C	Exon16	frameshift deletion	c.4547delA
2	PRRT2	Exon2	frameshift insertion	c.649dupC
1	PRSS12	Exon13	frameshift deletion	c.2488_2489delAT
1	PRSS12	Exon2	frameshift deletion	c._del
1	PRSS12	Exon2	frameshift deletion	c.631delC
1	PRSS36	Exon15	stopgain SNV	c.2406G>A
1	PRSS37	Exon3	frameshift deletion	c.234_237delGACA
1	PRSS37	Exon2	frameshift insertion	c.151dupC
1	PRSS3	Exon6	splicing	c.634-1G>T
1	PRSS45	Exon1	stopgain SNV	c.84G>A
1	PRSS53	Exon3	splicing	c.79+2dupT
1	PRSS57	Exon4	stopgain SNV	c.535A>T
1	PRSS58	Exon4	frameshift insertion	c.187_188insAC
1	PRSS58	Exon4	frameshift insertion	c.185_186insAA
2	PRSS8	Exon4	frameshift deletion	c.293delT
1	PRUNE2	Exon8	frameshift deletion	c.2515_2518delAGTG
1	PRUNE2	Exon7	splicing	c.662-1G>C
17	PSAPL1	Exon1	frameshift insertion	c.50dupC
11	PSCA	Exon3	stopgain SNV	c.326G>A
1	PSD3	Exon4	frameshift deletion	c.1502delA
1	PSD4	Exon4	splicing	c.1174-1G>A
1	PSEN2	Exon5	frameshift deletion	c.337_338delAC
1	PSG11	Exon1	stopgain SNV	c.44G>A
1	PSG1	Exon3	stopgain SNV	c.487G>T
1	PSG5	Exon3	stopgain SNV	c.664C>T
1	PSG6	Exon4	stopgain SNV	c.940C>T
1	PSG6	Exon2	stopgain SNV	c.289C>T
2	PSG6	Exon2	frameshift deletion	c.136delT

1	PSG8	Exon3	splicing	c.430+1G>A
1	PSG9	Exon2	stopgain SNV	c.406C>T
2	PSG9	Exon2	stopgain SNV	c.379C>T
1	PSG9	Exon2	stopgain SNV	c.68C>G
6	PSKH2	Exon3	stopgain SNV	c.956G>A
1	PSKH2	Exon2	stopgain SNV	c.442C>T
3	PSMB11	Exon1	frameshift deletion	c.237delC
1	PSMB1	Exon6	frameshift deletion	c.717delG
1	PSMC3IP	Exon9	splicing	c.598-1G>A
1	PSMC5	Exon2	frameshift insertion	c.59dupT
1	PSMD11	Exon10	frameshift insertion	c.978_979insA
4	PSMD12	Exon7	splicing	c.601-1G>C
1	PSPC1	Exon10	frameshift insertion	c.1475dupT
1	PSPH	Exon4	stopgain SNV	c.106A>T
1	PSRC1	Exon4	frameshift insertion	c.180_181insTCCG
1	PSTPIP2	Exon5	frameshift deletion	c.270delT
1	PTBP2	Exon9	frameshift deletion	c.967delG
1	PTCD3	Exon4	stopgain SNV	c.195G>A
1	PTCH2	Exon8	frameshift deletion	c.938_939delCA
7	PTCHD3	Exon4	frameshift insertion	c.1992dupA
16	PTCHD3	Exon4	frameshift deletion	c.1767delA
2	PTCHD3	Exon4	stopgain SNV	c.1426C>T
1	PTDSS2	Exon10	frameshift deletion	c.1067delA
1	PTGDR	Exon1	stopgain SNV	c.531C>G
1	PTGDR	Exon1	frameshift insertion	c.734_735insGCCC
1	PTGER2	Exon2	stopgain SNV	c.874C>T
1	PTGES2	Exon5	frameshift deletion	c.880_881delAA
1	PTGES2	Exon4	frameshift insertion	c.572_573insT
1	PTGIS	Exon7	stopgain SNV	c.940G>T
1	PTH1R	Exon8	splicing	c.544-2A>C
12	PTH2R	Exon3	stopgain SNV	c.245C>A
1	PTK6	Exon4	frameshift insertion	c.538_539insG

1	PTK7	Exon14	frameshift deletion	c.2243delG
1	PTPLAD1	Exon10	stopgain SNV	c.952delG
1	PTPN11	Exon5	stopgain SNV	c.591T>G
1	PTPN13	Exon25	splicing	c.3757-1G>A
1	PTPN18	Exon3	stopgain SNV	c.244G>T
3	PTPN21	Exon4	stopgain SNV	c.405T>A
1	PTPN22	Exon1	frameshift deletion	c.78delT
1	PTPN5	Exon9	frameshift deletion	c.903delC
1	PTPN7	Exon9	stopgain SNV	c.1228C>T
1	PTPN7	Exon2	frameshift deletion	c.436delA
2	PTPN9	Exon11	frameshift deletion	c.1236delT
1	PTPRA	Exon10	frameshift insertion	c.439_440insT
1	PTPRD	Exon39	frameshift insertion	c.4563dupT
2	PTPRF	Exon26	frameshift deletion	c.4524delT
1	PTPRF	Exon26	frameshift insertion	c.4527dupA
2	PTPRH	Exon15	frameshift deletion	c.2290delC
4	PTPRH	Exon14	stopgain SNV	c.2158C>T
1	PTPRH	Exon3	frameshift deletion	c.237_238delAA
1	PTPRH	Exon3	frameshift deletion	c.236_237delCA
1	PTPRM	Exon12	stopgain SNV	c.2011C>T
2	PTPRM	Exon30	splicing	c.3919-1G>A
1	PTPRN2	Exon16	splicing	c.2367+1G>T
1	PTPRN2	Exon8	frameshift deletion	c.1297delC
1	PTPRQ	Exon12	frameshift deletion	c.1855delC
2	PTPRR	Exon10	stopgain SNV	c.1365C>A
8	PTPRT	Exon8	frameshift deletion	c.1311delC
1	PTPRU	Exon10	frameshift deletion	c.1712delC
2	PTPRU	Exon28	frameshift deletion	c.4020_4021delCA
1	PTS	Exon2	splicing	c.84-2A>G
12	PTTG2	Exon1	frameshift deletion	c.554_555delAT
1	PUF60	Exon8	frameshift deletion	c.792delA
1	PUF60	Exon8	frameshift deletion	c.785delC

1	PUM2	Exon8	frameshift deletion	c.1089delA
2	PVRIG	Exon6	frameshift insertion	c.925_926dupCT
1	PVRIG	Exon6	stopgain SNV	c.958G>T
1	PWP2	Exon5	stopgain SNV	c.420T>G
15	PXDNL	Exon19	stopgain SNV	c.3774T>A
3	PXDNL	Exon11	frameshift deletion	c.1341delT
1	PXDNL	Exon11	stopgain SNV	c.1314G>A
1	PXDNL	Exon10	stopgain SNV	c.1183C>T
1	PXMP2	Exon4	frameshift deletion	c.440delG
1	PYGB	Exon8	frameshift deletion	c.877delC
1	PYGB	Exon8	frameshift deletion	c.889_890delGG
1	PYGL	Exon19	stopgain SNV	c.2416G>T
1	PYGM	Exon18	frameshift insertion	c.2200_2201insA
2	PYGM	Exon1	stopgain SNV	c.148C>T
1	PYHIN1	Exon4	frameshift deletion	c.423delA
1	PYROXD1	Exon11	frameshift deletion	c.1193_1194delCT
1	PYROXD2	Exon15	frameshift deletion	c.1662_1663delTG
1	PZP	Exon24	frameshift deletion	c.2995delA
3	PZP	Exon17	stopgain SNV	c.2038C>T
1	PZP	Exon15	splicing	c.1689+1G>A
1	QARS	Exon15	frameshift deletion	c.1362_1365delACTC
1	QPCT	Exon3	stopgain SNV	c.397C>T
1	QPRT	Exon2	stopgain SNV	c.208C>T
1	QRFPR	Exon4	frameshift deletion	c.567delA
2	QRICH1	Exon6	frameshift deletion	c.1680delT
1	QSOX2	Exon4	stopgain SNV	c.487C>T
5	R3HDML	Exon2	frameshift deletion	c.377delG
1	RAB11A	Exon5	stoploss SNV	c.467G>C
1	RAB11FIP5	Exon5	frameshift insertion	c.1942_1943insT
1	RAB37	Exon4	frameshift deletion	c.233delA
1	RAB38	Exon2	frameshift deletion	c.384delA

1	RAB3GAP2	Exon17	frameshift deletion	c.1776delA
6	RAB3IP	Exon2	stopgain SNV	c.17T>A
1	RAB41	Exon8	frameshift deletion	c.613delG
1	RAB42	Exon2	frameshift deletion	c.202_203delCT
4	RAB5C	Exon6	splicing	c.441+2T>A
1	RABEP1	Exon9	frameshift deletion	c.1281delA
8	RABEPK	Exon5	frameshift deletion	c.251delC
1	RABIF	Exon2	frameshift deletion	c.291delT
9	RABL2A	Exon5	frameshift deletion	c.232delG
1	RABL2A	Exon9	stopgain SNV	c.659C>A
1	RABL2B	Exon5	frameshift deletion	c.223delT
1	RAD1	Exon5	splicing	c.566+2T>C
1	RAD1	Exon4	stopgain SNV	c.325C>T
1	RAD51AP1	Exon6	frameshift deletion	c.371delG
1	RAD51AP2	Exon1	frameshift deletion	c.2567_2570delTAGA
1	RAD51C	Exon4	stopgain SNV	c.577C>T
1	RAD51C	Exon7	splicing	c.905-2_905-1delAG
2	RAD51D	Exon3	stopgain SNV	c.220C>T
13	RAD52	Exon12	stopgain SNV	c.1245T>G
12	RAD52	Exon11	stopgain SNV	c.1037C>A
1	RAD52	Exon7	frameshift deletion	c.519delA
1	RAD52	Exon3	stopgain SNV	c.181C>T
1	RAD54L	Exon5	stopgain SNV	c.223C>T
1	RAD9B	Exon8	frameshift insertion	c.748_749insC
2	RAD9B	Exon12	frameshift deletion	c.1248_1251delAGAA
1	RAET1E	Exon4	stopgain SNV	c.567C>A
3	RAET1E	Exon2	stopgain SNV	c.4C>T
1	RAG1	Exon2	frameshift deletion	c.319delC
1	RAG1	Exon2	stopgain SNV	c.322C>T
1	RAG1	Exon2	frameshift deletion	c.1660delG
1	RAG2	Exon2	stopgain SNV	c.595G>T
1	RAI14	Exon14	frameshift	c.2090_2091delAC

			deletion	
1	RAI1	Exon3	frameshift deletion	c.840_843delGCAG
1	RALBP1	Exon4	frameshift insertion	c.949_950insG
3	RALGAPA2	Exon20	frameshift deletion	c.2599delC
1	RALY	Exon7	frameshift insertion	c.695dupG
1	RANBP17	Exon15	splicing	c.1784+1G>C
1	RANBP17	Exon23	frameshift insertion	c.2609_2610dupTG
1	RANBP1	Exon6	frameshift insertion	c.542_543insAGAGT
1	RANBP3L	Exon12	splicing	c.904-1G>C
5	RANGRF	Exon2	stopgain SNV	c.181G>T
1	RAP1GAP	Exon27	splicing	c.2038-1G>T
2	RAP2C	Exon3	frameshift insertion	c.474_475insA
1	RAPGEF3	Exon23	frameshift deletion	c.2372_2373delTG
4	RAPGEF4	Exon6	splicing	c.537+2T>A
3	RAPGEF6	Exon27	stopgain SNV	c.4111G>T
2	RAPH1	Exon14	stopgain SNV	c.3029C>G
1	RAPSN	Exon7	frameshift deletion	c.980delA
1	RARA	Exon9	frameshift insertion	c.1211dupG
1	RARRES3	Exon3	frameshift deletion	c.246delT
1	RARS	Exon10	stopgain SNV	c.1133C>G
1	RASAL2	Exon1	frameshift insertion	c.84_85insA
1	RASAL2	Exon18	stoploss SNV	c.3843A>T
1	RASD1	Exon2	stopgain SNV	c.313G>T
1	RASGEF1A	Exon4	stopgain SNV	c.453T>A
1	RASGRF1	Exon12	frameshift insertion	c.1739dupG
1	RASGRP3	Exon13	stopgain SNV	c.1271T>G
1	RASGRP4	Exon16	stopgain SNV	c.1720C>T
1	RASSF6	Exon8	splicing	c.765+2_765+2delT
1	RASSF9	Exon2	stopgain SNV	c.829C>T
1	RBBP8	Exon11	frameshift deletion	c.1071delA
1	RBBP8	Exon18	frameshift deletion	c.2531delC
1	RBCK1	Exon9	splicing	c.1209+2_1209+3insA
1	RBFox1	Exon9	splicing	c.562-1G>C

7	RBKS	Exon3	splicing	c.90-1G>C
1	RBL1	Exon13	frameshift insertion	c.1700dupC
1	RBL1	Exon11	frameshift deletion	c._del
1	RBM15B	Exon1	frameshift deletion	c.2054delA
1	RBM15B	Exon1	frameshift insertion	c.2137_2138insC
1	RBM15B	Exon1	frameshift deletion	c.2141delA
1	RBM15B	Exon1	frameshift insertion	c.2529dupG
1	RBM19	Exon6	frameshift deletion	c.661delT
1	RBM23	Exon5	splicing	c.180-1G>A
3	RBM27	Exon14	stopgain SNV	c.2288C>G
3	RBM43	Exon4	frameshift insertion	c.406dupA
1	RBM44	Exon3	frameshift insertion	c.438dupT
1	RBM44	Exon7	frameshift deletion	c.2118_2119delAC
1	RBM6	Exon15	frameshift deletion	c.2471delT
1	RBMS1	Exon4	splicing	c.252-15_252-3del TTTTTTTTTTTT
1	RBMS1	Exon3	splicing	c.251+2dupT
1	RBMS3	Exon13	splicing	c.1259+2_1259+5dupTAAG
2	RBMXL1	Exon2	frameshift insertion	c.904_905dupCC
5	RBMXL1	Exon2	frameshift insertion	c.315_316insTT
3	RBMXL1	Exon2	frameshift deletion	c.1delA
1	RBP3	Exon1	frameshift insertion	c.2832_2833insT
1	RBPMS	Exon5	frameshift insertion	c.286_287insG
5	RC3H1	Exon7	frameshift deletion	c.1145_1146delTT
2	RCC1	Exon11	stopgain SNV	c.948C>G
1	RCCD1	Exon5	frameshift deletion	c.634_635delAT
1	RCN3	Exon2	frameshift deletion	c.145delC
1	RCOR2	Exon7	stopgain SNV	c.667A>T
1	RCOR3	Exon3	stopgain SNV	c.269G>A
1	RCSD1	Exon6	stopgain SNV	c.544G>T
1	RDH12	Exon4	stopgain SNV	c.184C>T
1	RDH12	Exon6	splicing	c.448+1G>C
1	RDH13	Exon6	frameshift deletion	c.243_244delCT

1	RDH16	Exon3	stopgain SNV	c.595delG
2	RDM1	Exon2	frameshift deletion	c.121_122delCA
8	RDX	Exon12	splicing	c.1251+2T>A
1	RDX	Exon11	stopgain SNV	c.1135C>T
1	RECQL5	Exon7	frameshift deletion	c.1124delT
1	RECQL	Exon14	frameshift insertion	c.1775dupA
2	RECQL	Exon12	splicing	c.1355+1G>A
12	REEP2	Exon5	splicing	c.417+1G>A
1	REEP3	Exon5	frameshift deletion	c.369_370delGG
1	REG1B	Exon4	frameshift insertion	c.320dupA
1	REG3G	Exon5	stopgain SNV	c.398G>A
11	RELA	Exon4	stopgain SNV	c.202G>T
5	RELN	Exon64	stopgain SNV	c.10291C>T
2	RELN	Exon11	frameshift deletion	c.1191delA
1	RELT	Exon5	frameshift deletion	c.318delT
1	RERGL	Exon6	stopgain SNV	c.391C>T
1	RERGL	Exon4	frameshift deletion	c.120_123delCTAT
1	RESP18	Exon5	splicing	c.465+1G>T
3	RETSAT	Exon9	frameshift deletion	c.1458_1459delTG
1	RETSAT	Exon8	stopgain SNV	c.1288G>T
3	RETSAT	Exon9	splicing	c.1257-1G>C
1	RETSAT	Exon5	stopgain SNV	c.877C>T
1	RETSAT	Exon5	frameshift insertion	c.822dupC
1	RETSAT	Exon3	splicing	c.173-2A>G
1	REV1	Exon6	frameshift deletion	c.836delT
1	REV3L	Exon12	frameshift deletion	c.1485_1486delAA
1	RFC5	Exon2	frameshift insertion	c.69_70insA
1	RFFL	Exon7	frameshift deletion	c.1056delG
1	RFPL1	Exon2	stopgain SNV	c.442C>T
1	RFPL1	Exon2	stopgain SNV	c.545G>A
2	RFPL2	Exon5	splicing	c.287-2A>T
4	RFT1	Exon6	frameshift deletion	c.678delC
1	RFT1	Exon6	frameshift deletion	c.662_663delTA

2	RFX3	Exon7	frameshift deletion	c.701delT
2	RFX8	Exon4	splicing	c.73-2A>C
1	RG9MTD2	Exon7	splicing	c.496-1G>A
1	RG9MTD2	Exon2	stopgain SNV	c.79G>T
1	RG9MTD3	Exon2	frameshift insertion	c.135_136insA
1	RG9MTD3	Exon7	splicing	c.720+2_720+3dupTA
1	RGAG1	Exon3	frameshift deletion	c.2337delG
1	RGAG1	Exon3	frameshift deletion	c.3154delT
1	RGAG4	Exon1	frameshift deletion	c.1543delC
1	RGAG4	Exon1	frameshift deletion	c.1142_1143delTG
1	RGAG4	Exon1	frameshift deletion	c.139delC
4	RGL2	Exon5	frameshift insertion	c.362dupG
1	RGL3	Exon17	stopgain SNV	c.1846C>T
1	RGL3	Exon14	frameshift deletion	c._del
2	RGL4	Exon4	frameshift insertion	c.853dupC
1	RGPD3	Exon20	frameshift deletion	c.3974_3977delCTCA
1	RGPD3	Exon2	stopgain SNV	c.93T>A
1	RGPD3	Exon1	frameshift deletion	c.60delG
1	RGS12	Exon10	splicing	c.2762-1_2762-1delG
2	RGS18	Exon1	frameshift deletion	c.51delA
2	RGS6	Exon8	splicing	c.513+2_513+2delT
1	RGS7	Exon18	stopgain SNV	c.1439T>G
1	RGS9	Exon18	stopgain SNV	c.1537C>T
2	RHBDD3	Exon6	stopgain SNV	c.867G>A
1	RHBDF1	Exon16	frameshift deletion	c.1922delT
1	RHBDL2	Exon3	splicing	c.246+1G>A
1	RHBG	Exon4	stopgain SNV	c.610C>T
1	RHBG	Exon8	frameshift deletion	c.1125_1126delGT
1	RHBG	Exon9	frameshift insertion	c.1272dupC
1	RHCG	Exon6	frameshift insertion	c.891_892insA
1	RHOBTB3	Exon7	stopgain SNV	c.1066G>T
1	RHOBTB3	Exon10	frameshift deletion	c.1464delA
1	RHO	Exon2	frameshift	c.383_392delTGGTGGTCCT

			deletion	
1	RICTOR	Exon29	frameshift insertion	c.2805dupA
1	RILP	Exon8	frameshift deletion	c.1138_1139delCC
1	RIMBP2	Exon11	frameshift insertion	c.2163_2164insTG
3	RIMBP3	Exon1	frameshift insertion	c.3429dupT
3	RIMS1	Exon25	splicing	c.3737+1G>A
1	RIMS2	Exon3	stopgain SNV	c.502C>T
1	RIMS2	Exon16	stopgain SNV	c.2776C>T
3	RINT1	Exon5	stopgain SNV	c.556G>T
1	RIOK2	Exon8	stopgain SNV	c.915C>A
1	RIPK1	Exon7	frameshift deletion	c.942delT
4	RIPK3	Exon10	frameshift insertion	c.1475dupC
3	RIPK3	Exon8	stopgain SNV	c.1264C>T
1	RIPK4	Exon8	frameshift deletion	c.2260_2261delCT
1	RIPK4	Exon3	frameshift deletion	c.595delC
1	RLBP1	Exon5	frameshift deletion	c.302delG
1	RLBP1	Exon5	frameshift deletion	c.299delT
1	RLN1	Exon2	frameshift deletion	c.390delG
1	RLN3	Exon1	stopgain SNV	c.121C>T
1	RLN3	Exon2	stopgain SNV	c.310C>T
1	RLTPR	Exon24	frameshift deletion	c.2370delG
1	RLTPR	Exon25	frameshift insertion	c.2533_2534insCA
1	RLTPR	Exon25	frameshift deletion	c.2552delC
1	RMND5B	Exon4	stopgain SNV	c.217C>T
1	RMND5B	Exon9	splicing	c.963+1G>T
1	RNASE2	Exon2	stopgain SNV	c.187C>T
1	RNASE9	Exon3	frameshift deletion	c.66delG
5	RNASEH2A	Exon2	splicing	c.199+2T>G
4	RNASEL	Exon2	stopgain SNV	c.793G>T
2	RNASEL	Exon2	frameshift deletion	c.471_474delAAAG
1	RNASEL	Exon2	frameshift deletion	c.126delG
1	RNF112	Exon12	stopgain SNV	c.1334C>A

1	RNF112	Exon14	stopgain SNV	c.1859G>A
1	RNF123	Exon21	frameshift insertion	c.1827dupC
7	RNF123	Exon22	stopgain SNV	c.1904delC
6	RNF141	Exon6	stoploss SNV	c.693A>T
1	RNF145	Exon2	frameshift deletion	c.75delG
1	RNF168	Exon4	frameshift deletion	c.640_644delAAAAG
1	RNF180	Exon4	frameshift insertion	c.484_485insTT
1	RNF180	Exon4	frameshift insertion	c.503_504insGGTGG
1	RNF181	Exon5	frameshift deletion	c.448delG
2	RNF186	Exon1	stopgain SNV	c.535C>T
1	RNF187	Exon3	frameshift deletion	c.633_634delCA
1	RNF19A	Exon2	stopgain SNV	c.71C>G
1	RNF20	Exon7	stopgain SNV	c.787C>T
1	RNF214	Exon15	frameshift deletion	c.2055_2056delAT
1	RNF217	Exon6	stopgain SNV	c.502C>T
2	RNF25	Exon10	stopgain SNV	c.1138A>T
1	RNF25	Exon10	frameshift deletion	c.1123_1124delCC
1	RNF25	Exon10	frameshift insertion	c.897_898insT
1	RNF34	Exon3	frameshift deletion	c.621delA
1	RNLS	Exon2	frameshift deletion	c.216delA
1	RNMTL1	Exon4	stopgain SNV	c.1018C>T
2	RNPEP	Exon2	splicing	c.448-1G>C
1	RNPS1	Exon6	frameshift deletion	c.581delT
1	ROBO3	Exon1	frameshift deletion	c.55_56delCT
1	ROCK1	Exon5	stopgain SNV	c.444T>G
1	ROM1	Exon1	frameshift insertion	c.339dupG
2	ROM1	Exon3	frameshift deletion	c.868delC
1	ROPN1B	Exon2	stopgain SNV	c.107G>A
1	ROPN1L	Exon3	stopgain SNV	c.135T>A
4	ROR2	Exon8	stopgain SNV	c.1201A>T
1	ROS1	Exon31	stopgain SNV	c.5114C>G

2	RP1L1	Exon2	frameshift insertion	c.416dupC
5	RP9	Exon6	stoploss SNV	c.664delT
1	RPAIN	Exon2	frameshift deletion	c.245_246delTT
1	RPAP2	Exon9	frameshift deletion	c.1530_1534delGAGTA
1	RPF1	Exon2	frameshift deletion	c.261_264delAAAA
1	RPF1	Exon6	frameshift deletion	c.671_672delGC
2	RPGRIP1L	Exon17	frameshift insertion	c.2582dupT
1	RPGRIP1L	Exon17	frameshift deletion	c.2468_2477del CAGACCATGA
1	RPGRIP1	Exon3	frameshift deletion	c.471delG
1	RPL10	Exon5	frameshift deletion	c.300delC
1	RPL30	Exon5	frameshift insertion	c.337_338insAG
1	RPL3L	Exon8	frameshift insertion	c.980_981insG
2	RPL3L	Exon7	frameshift deletion	c.918delC
1	RPL3	Exon6	frameshift deletion	c.754delG
1	RPS27L	Exon3	stopgain SNV	c.168T>A
1	RPS6KA3	Exon20	frameshift deletion	c.1848delT
1	RPS6KB2	Exon13	frameshift insertion	c.1153dupC
1	RPTN	Exon3	stopgain SNV	c.2227C>T
1	RPTN	Exon3	stopgain SNV	c.1375C>T
1	RPTOR	Exon20	frameshift deletion	c.2331delT
1	RPUSD3	Exon8	stoploss SNV	c.1009T>G
1	RPUSD4	Exon5	splicing	c.558-1G>A
3	RRAS	Exon2	stopgain SNV	c.198C>G
1	RRH	Exon3	frameshift insertion	c.395dupT
2	RRM1	Exon14	stopgain SNV	c.1481C>A
6	RRN3	Exon16	frameshift deletion	c.1647delG
4	RRP12	Exon15	splicing	c.1680+2T>G
5	RRP15	Exon5	frameshift deletion	c.816delC
1	RRP1	Exon6	frameshift insertion	c.471_472insTT
1	RRP36	Exon3	splicing	c.345+2T>A
1	RRP8	Exon7	splicing	c.1251+1G>A
1	RRP8	Exon3	frameshift deletion	c.876delA

1	RSBN1	Exon1	frameshift deletion	c.612delC
13	RSF1	Exon13	stopgain SNV	c.3272T>G
1	RSF1	Exon6	stopgain SNV	c.2179G>T
2	RSPH1	Exon5	splicing	c.275-2A>C
1	RSPO3	Exon4	frameshift deletion	c.516delT
1	RTF1	Exon4	frameshift deletion	c.482delA
1	RTL1	Exon1	frameshift deletion	c.106_107delAC
2	RTN4IP1	Exon1	frameshift deletion	c.49_50delGT
1	RTP2	Exon2	frameshift insertion	c.205_206insT
1	RTTN	Exon39	frameshift deletion	c.5250_5251delCC
1	RUFY3	Exon13	frameshift insertion	c.1444_1445insA
1	RUFY3	Exon13	frameshift deletion	c.1447delA
1	RUFY4	Exon7	stopgain SNV	c.516G>A
8	RUSC1-AS1	Exon2	stopgain SNV	c.17C>A
1	RUSC2	Exon2	stopgain SNV	c.66C>A
1	RUSC2	Exon10	frameshift insertion	c.3420_3421insA
1	RWDD2B	Exon5	frameshift deletion	c.846_852delCAGTGTT
1	RWDD2B	Exon4	splicing	c.362+1G>A
1	RXFP4	Exon1	stopgain SNV	c.58G>T
1	RXRA	Exon7	stopgain SNV	c.915G>A
1	RYR1	Exon20	frameshift deletion	c.2505delG
1	RYR1	Exon63	frameshift deletion	c.9405delA
1	RYR1	Exon67	frameshift deletion	c.10039_10040delAG
1	RYR1	Exon72	frameshift deletion	c.10806_10809delCCAG
1	RYR1	Exon105	stopgain SNV	c.15020G>A
1	RYR2	Exon68	stopgain SNV	c.9615T>A
3	RYR2	Exon68	frameshift deletion	c.9624delA
1	RYR3	Exon24	frameshift insertion	c.2966dupA
6	S100A3	Exon3	frameshift deletion	c.208delG
1	S1PR1	Exon2	stopgain SNV	c.662_663insAA
1	S1PR2	Exon2	stopgain SNV	c.178C>T

2	SAA1	Exon5	frameshift deletion	c.324_325delAA
1	SAAL1	Exon11	splicing	c.1239+1G>A
1	SACM1L	Exon10	stopgain SNV	c.791G>A
3	SACS	Exon10	frameshift deletion	c.12950delC
1	SACS	Exon10	stopgain SNV	c.11665C>T
1	SACS	Exon10	stopgain SNV	c.6434T>A
1	SAFB2	Exon21	frameshift insertion	c.2834dupC
3	SAFB2	Exon9	frameshift deletion	c.1288delT
1	SAFB2	Exon2	frameshift deletion	c.256delG
1	SALL2	Exon2	frameshift deletion	c.1834delT
2	SAMD11	Exon7	frameshift insertion	c.682_683insT
1	SAMD12	Exon4	frameshift deletion	c.325delC
1	SAMD15	Exon1	frameshift deletion	c.1515_1516delTG
2	SAMD15	Exon3	stopgain SNV	c.1807C>T
1	SAMD3	Exon11	frameshift deletion	c.1272_1275delTGAA
1	SAMD3	Exon8	stopgain SNV	c.667C>T
1	SAMD3	Exon8	splicing	c.654+1G>A
9	SAMD4A	Exon6	splicing	c.1247-2A>C
1	SAMD9L	Exon5	frameshift insertion	c.4140dupA
1	SAMD9L	Exon5	stopgain SNV	c.1216C>T
2	SAMD9L	Exon5	frameshift insertion	c.308dupA
4	SAMD9	Exon2	frameshift deletion	c.4314_4315delAT
1	SAMD9	Exon2	frameshift insertion	c.2265dupG
1	SAMD9	Exon2	frameshift deletion	c.1880delC
1	SAP130	Exon9	frameshift deletion	c.1121_1122delCA
2	SAP130	Exon3	stopgain SNV	c.307C>T
1	SARDH	Exon14	stopgain SNV	c.1798C>T
1	SARDH	Exon3	stopgain SNV	c.445C>T
4	SARM1	Exon2	frameshift insertion	c.545_546insGC
4	SARM1	Exon2	frameshift deletion	c.550_551delGT
1	SARS2	Exon11	stopgain SNV	c.1030C>T
5	SASH1	Exon8	frameshift	c.723delC

			deletion	
1	SASH1	Exon13	frameshift deletion	c.1562delT
1	SASH3	Exon4	splicing	c.301-1G>A
1	SATL1	Exon5	splicing	c.1775-1G>C
1	SATL1	Exon1	stopgain SNV	c.1325G>A
1	SATL1	Exon1	stopgain SNV	c.1006delC
1	SATL1	Exon1	stopgain SNV	c.907C>T
2	SBDS	Exon3	splicing	c.258+2T>C
1	SBF2	Exon37	splicing	c.5037+1G>A
1	SC5DL	Exon2	stopgain SNV	c.85C>T
1	SCAF11	Exon11	frameshift insertion	c.2194dupG
1	SCAF11	Exon11	frameshift deletion	c.2163delT
1	SCAF11	Exon5	splicing	c.297+1G>A
1	SCAF1	Exon9	frameshift insertion	c.3540dupC
1	SCAF8	Exon20	stopgain SNV	c.2608G>T
1	SCAMP1	Exon8	stopgain SNV	c.823C>T
1	SCAPER	Exon4	stopgain SNV	c.334C>T
1	SCAPER	Exon4	frameshift insertion	c.323dupA
1	SCAP	Exon23	frameshift deletion	c.3768delT
2	SCARA3	Exon5	frameshift deletion	c.922_923delCA
1	SCARA3	Exon5	stopgain SNV	c.1002C>G
1	SCEL	Exon2	stopgain SNV	c.19A>T
1	SCEL	Exon15	splicing	c.852-2dupA
1	SCFD1	Exon20	stopgain SNV	c.1513A>T
1	SCG2	Exon2	frameshift deletion	c.80delC
1	SCG2	Exon2	frameshift deletion	c.73delG
2	SCGB1A1	Exon1	frameshift deletion	c.15delC
1	SCGB1D2	Exon2	stopgain SNV	c.220C>T
1	SCGN	Exon2	frameshift deletion	c.89delG
1	SCIN	Exon10	stopgain SNV	c.1339C>T
1	SCML4	Exon6	stopgain SNV	c.804C>A
1	SCN10A	Exon25	frameshift deletion	c.4327delT
2	SCN10A	Exon1	frameshift deletion	c.239delA

1	SCN11A	Exon26	frameshift deletion	c.4610_4611delTT
3	SCN1A	Exon10	stopgain SNV	c.1086C>A
8	SCN2A	Exon10	stopgain SNV	c.1284T>G
1	SCN2A	Exon10	stopgain SNV	c.1342C>T
15	SCN3A	Exon12	stopgain SNV	c.1597A>T
1	SCN3B	Exon3	frameshift insertion	c.245_246insC
1	SCN3B	Exon3	frameshift insertion	c.239dupG
1	SCN4A	Exon21	stopgain SNV	c.3781G>T
1	SCN4A	Exon19	stopgain SNV	c.3564C>G
1	SCN4A	Exon13	frameshift insertion	c.2080_2081insT
11	SCN5A	Exon26	frameshift deletion	c.4512delC
2	SCN5A	Exon10	splicing	c.999-2A>C
3	SCN7A	Exon25	splicing	c.3712-2A>G
1	SCN7A	Exon23	frameshift insertion	c.3676dupT
1	SCNM1	Exon6	splicing	c.488+2T>A
3	SCNM1	Exon6	splicing	c.488+2T>C
1	SCRN1	Exon8	frameshift deletion	c.1296_1299delCTTT
1	SCRN2	Exon2	frameshift deletion	c.169delC
1	SCRN3	Exon3	stopgain SNV	c.209G>A
1	SCUBE2	Exon16	splicing	
1	SCYL1	Exon11	splicing	c.1575+1_1575+1delG
4	SDC2	Exon5	frameshift deletion	c.588delT
1	SDC2	Exon5	frameshift deletion	c.599delA
3	SDCCAG8	Exon1	splicing	c.67+1G>T
1	SDCCAG8	Exon18	splicing	c.2113-15_2113-14insATTA
1	SDHA	Exon2	stopgain SNV	c.91C>T
1	SDHA	Exon2	frameshift insertion	c.124_125dupAG
1	SDHA	Exon15	frameshift deletion	c.1946_1947delTT
1	SDK2	Exon10	frameshift deletion	c.1292delC
1	SDR39U1	Exon6	frameshift deletion	c.542delG
3	SDSL	Exon8	frameshift deletion	c.685delC
3	SDSL	Exon8	stopgain SNV	c.727C>T
3	SEC14L4	Exon5	stopgain SNV	c.400G>T

1	SEC22B	Exon4	stopgain SNV	c.475C>T
1	SEC22C	Exon6	splicing	c.527-1G>T
3	SEC23A	Exon18	stopgain SNV	c.1996C>T
1	SEC23B	Exon2	frameshift deletion	c.80delG
1	SEC23B	Exon6	stopgain SNV	c.640C>T
1	SEC31B	Exon17	frameshift deletion	c.2098delG
1	SEC31B	Exon15	stopgain SNV	c.1759G>T
1	SEC61A2	Exon9	stopgain SNV	c.950T>G
2	SEC61A2	Exon9	frameshift deletion	c.962delT
1	SEL1L2	Exon11	frameshift deletion	c.1019delT
1	SEL1L2	Exon5	splicing	c.284-2A>G
18	SELL	Exon3	splicing	c.43-1G>A
1	SELPLG	Exon2	frameshift insertion	c.615_616insAA
6	SELP	Exon4	frameshift deletion	c.489_490delCC
1	SELP	Exon4	stopgain SNV	c.489C>A
2	SEMA5B	Exon13	frameshift deletion	c.1749delC
3	SEMA6A	Exon7	stopgain SNV	c.508A>T
1	SEMA6C	Exon13	frameshift deletion	c.1243delA
1	SEMG2	Exon2	stopgain SNV	c.559C>T
1	SEMG2	Exon2	stopgain SNV	c.1423G>T
1	SEMG2	Exon2	stopgain SNV	c.1554G>A
1	SENP5	Exon2	stopgain SNV	c.410T>A
1	SEPSECS	Exon7	frameshift insertion	c.808dupG
1	Sep-10	Exon9	stopgain SNV	c.1033C>T
1	Sep-14	Exon9	stopgain SNV	c.1075C>T
1	Sep-01	Exon12	splicing	c.1032+2T>A
1	Sep-02	Exon7	frameshift deletion	c.478delC
1	Sep-06	Exon3	stopgain SNV	c.244C>T
1	Sep-07	Exon12	stopgain SNV	c.1210C>T
1	SERAC1	Exon16	splicing	c.1684+2T>C
4	SERAC1	Exon7	frameshift deletion	c.548delG
1	SERAC1	Exon4	stopgain SNV	c.202C>T

2	SERGEF	Exon6	stopgain SNV	c.556C>T
1	SERGEF	Exon3	stopgain SNV	c.285C>A
1	SERHL2	Exon3	frameshift deletion	c.257_261delTTGTG
3	SERHL2	Exon8	splicing	c.613+2T>A
1	SERHL2	Exon11	splicing	c.825+1G>A
1	SERHL2	Exon11	splicing	c.825+2T>A
1	SERINC5	Exon11	splicing	c.1054-2_1054-2delA
1	SERPINA10	Exon3	stopgain SNV	c.972G>A
7	SERPINA10	Exon2	stopgain SNV	c.262C>T
5	SERPINA12	Exon3	stopgain SNV	c.631C>T
1	SERPINA1	Exon6	splicing	c.1065+2T>G
2	SERPINA3	Exon2	frameshift deletion	c.118delG
1	SERPINA4	Exon3	stopgain SNV	c.761G>A
1	SERPINA4	Exon3	frameshift deletion	c.828_829delGT
3	SERPINA9	Exon5	splicing	c.1104+2T>C
2	SERPINA9	Exon2	stopgain SNV	c.616delG
4	SERPINA9	Exon2	stopgain SNV	c.604C>T
1	SERPINB10	Exon4	stopgain SNV	c.415C>T
1	SERPINB10	Exon7	frameshift deletion	c.1114delG
1	SERPINB11	Exon8	splicing	c.775-2A>G
1	SERPINB11	Exon8	stoploss SNV	c.1177T>G
2	SERPINB13	Exon8	stopgain SNV	c.809G>A
1	SERPINB3	Exon8	frameshift insertion	c.1052_1053insTGGC
1	SERPINB3	Exon8	frameshift deletion	c.1050delA
3	SERPINB3	Exon4	frameshift insertion	c.334dupA
1	SERPINB4	Exon6	frameshift deletion	c.520delC
1	SERPINB7	Exon8	stopgain SNV	c.796C>T
1	SERPINC1	Exon2	frameshift insertion	c.388_389insT
1	SERPINE2	Exon2	stopgain SNV	c.223A>T
1	SERPINH1	Exon4	frameshift insertion	c.850_851insA
4	SERPINH1	Exon5	stopgain SNV	c.1123G>T
1	SERPINI1	Exon6	frameshift deletion	c.966delG
1	SERPINI1	Exon6	frameshift insertion	c.967_968insGC

1	SESN2	Exon9	frameshift deletion	c.1267delG
1	SESN3	Exon5	splicing	c.525+1G>C
15	SESTD1	Exon10	frameshift deletion	c.916delA
2	SETD2	Exon18	splicing	c.7238+2_7238+3delTA
8	SETD2	Exon18	splicing	c.7238+2T>A
1	SETD4	Exon6	stopgain SNV	c.386dupA
1	SETD5	Exon19	frameshift insertion	c.2752dupG
1	SETD6	Exon7	frameshift insertion	c.791_792insA
1	SETDB1	Exon20	frameshift deletion	c.3493_3494delCC
2	SF3A3	Exon15	frameshift deletion	c.1306delA
17	SF3B3	Exon3	frameshift insertion	c.381dupG
1	SF3B4	Exon3	frameshift deletion	c.397delA
1	SFI1	Exon29	frameshift deletion	c.3218_3224delAGCGGGC
1	SFN	Exon1	stopgain SNV	c.238G>T
1	SFN	Exon1	frameshift deletion	c.721delG
1	SFT2D1	Exon3	frameshift insertion	c.190_191insCC
1	SFXN3	Exon8	frameshift deletion	c.640delG
3	SFXN4	Exon15	splicing	c.937-1G>A
1	SGCB	Exon4	frameshift insertion	c.548_549dupAC
1	SGK1	Exon11	stopgain SNV	c.1099C>T
1	SGK223	Exon4	stopgain SNV	c.2935G>T
1	SGK494	Exon4	splicing	c.408+1G>A
2	SGPP2	Exon5	splicing	c.649-2A>G
1	SGSH	Exon3	frameshift deletion	c.298delT
1	SGSM2	Exon12	frameshift deletion	c.1317delC
1	SGSM2	Exon12	frameshift deletion	c.1318delA
1	SGSM3	Exon8	splicing	c.619-2A>T
1	SH2D2A	Exon5	frameshift deletion	c.454delT
1	SH2D4A	Exon6	splicing	c.706+1G>A
4	SH2D6	Exon1	splicing	c.168+2T>A
3	SH3BP2	Exon2	frameshift deletion	c.123delG
4	SH3BP4	Exon4	stopgain SNV	c.271G>T
1	SH3D21	Exon14	stopgain SNV	c.1615C>T
2	SH3GLB2	Exon9	splicing	c.649-1G>C

1	SH3PXD2B	Exon13	frameshift deletion	c.2626_2629delTTTG
1	SH3PXD2B	Exon13	frameshift deletion	c.2432delC
1	SH3TC1	Exon10	frameshift deletion	c.1216delA
1	SH3TC1	Exon13	splicing	c.2951-1G>C
4	SH3TC1	Exon14	splicing	c.3282+1G>A
1	SH3TC2	Exon11	stopgain SNV	c.2860C>T
1	SHANK1	Exon12	frameshift deletion	c.1814_1815delCT
1	SHANK2	Exon23	stoploss SNV	c.5240G>C
7	SHANK2	Exon22	stopgain SNV	c.4270C>T
1	SHANK2	Exon22	stopgain SNV	c.4081C>T
1	SHBG	Exon4	frameshift insertion	c.421dupG
1	SHBG	Exon4	frameshift insertion	c.424_425insA
1	SHBG	Exon7	frameshift deletion	c.857delA
1	SHC4	Exon12	frameshift deletion	c.1754delA
1	SHC4	Exon10	splicing	c.1303+2T>C
1	SHCBP1	Exon7	frameshift deletion	c.950delC
1	SHCBP1	Exon7	frameshift deletion	c.942delG
1	SHCBP1	Exon7	frameshift deletion	c.939delT
1	SHE	Exon3	frameshift deletion	c.967delG
1	SHF	Exon2	frameshift deletion	c.193delT
1	SHKBP1	Exon6	splicing	c.400+1G>A
1	SHKBP1	Exon14	frameshift insertion	c.1384dupC
1	SHPK	Exon7	stopgain SNV	c.1222C>T
1	SHPK	Exon3	frameshift insertion	c.420dupG
1	SHROOM1	Exon9	splicing	c.1812-2A>G
1	SHROOM2	Exon4	frameshift insertion	c.2696dupA
6	SHROOM2	Exon7	stopgain SNV	c.3637A>T
1	SIDT1	Exon8	stopgain SNV	c.865C>T
1	SIDT1	Exon18	splicing	c.1721-2A>T
1	SIDT2	Exon1	frameshift deletion	c.139delC
1	SIGLEC10	Exon11	splicing	c.1821+2T>A
1	SIGLEC12	Exon1	stopgain SNV	c.274C>T
5	SIGLEC1	Exon2	stopgain SNV	c.262G>T

1	SIGLEC5	Exon9	frameshift deletion	c.1473delG
1	SIGLEC5	Exon8	frameshift deletion	c.1407delA
7	SIGLEC5	Exon6	stopgain SNV	c.1066C>T
1	SIGLEC5	Exon5	stopgain SNV	c.907C>T
8	SIGLEC5	Exon5	frameshift insertion	c.827dupC
1	SIGLEC8	Exon2	frameshift deletion	c.561delC
1	SIGLEC8	Exon1	frameshift deletion	c.317delA
1	SIK2	Exon15	frameshift insertion	c.2391dupG
1	SIK3	Exon1	stopgain SNV	c.21C>A
1	SIKE1	Exon2	frameshift deletion	c.171delT
1	SIN3B	Exon5	frameshift insertion	c.668dupG
1	SIN3B	Exon8	frameshift insertion	c.1056_1057insA
1	SIN3B	Exon8	frameshift insertion	c.1057_1058insGA
1	SIPA1L2	Exon1	frameshift insertion	c.940dupA
1	SIPA1L2	Exon1	frameshift insertion	c.930_931insA
7	SIRPB1	Exon2	frameshift deletion	c.392_393delTG
5	SIRPB1	Exon2	frameshift deletion	c.388delG
1	SIRPG	Exon2	stopgain SNV	c.198G>A
1	SIRT3	Exon7	splicing	c.753+1G>A
1	SIRT4	Exon2	frameshift deletion	c.135delA
1	SKA3	Exon8	stopgain SNV	c.1213C>T
7	SKA3	Exon7	frameshift insertion	c.915_916insCTTTG
18	SKA3	Exon3	frameshift deletion	c.208delC
9	SKA3	Exon1	stopgain SNV	c.79C>T
1	SKIV2L	Exon6	splicing	c.470-2_470-2delA
1	SKIV2L	Exon26	stopgain SNV	c.3187C>T
1	SLA2	Exon7	stopgain SNV	c.571_572insA
1	SLA2	Exon2	frameshift deletion	c.56delC
16	SLAIN1	Exon6	frameshift deletion	c.1589delA
1	SLAMF1	Exon5	frameshift deletion	c.829delA
1	SLAMF8	Exon2	stopgain SNV	c.172G>T

1	SLA	Exon6	frameshift deletion	c.282_283delCG
1	SLA	Exon6	frameshift deletion	c.278delA
1	SLBP	Exon4	frameshift deletion	c.291delG
1	SLC10A1	Exon4	stopgain SNV	c.931A>T
1	SLC10A1	Exon1	stopgain SNV	c.256A>T
1	SLC10A4	Exon2	frameshift deletion	c.609delC
1	SLC12A1	Exon18	stopgain SNV	c.2203A>T
7	SLC12A2	Exon21	splicing	c.2930-1G>A
1	SLC12A2	Exon21	splicing	c.2977+1_2977+2delGG
1	SLC12A5	Exon5	frameshift deletion	c.516delC
1	SLC12A5	Exon8	frameshift deletion	c.1082delA
2	SLC12A5	Exon18	frameshift deletion	c.2254delA
1	SLC12A5	Exon18	frameshift deletion	c.2261delG
9	SLC12A5	Exon18	frameshift deletion	c.2269delG
1	SLC12A6	Exon15	stopgain SNV	c.1675G>T
1	SLC12A7	Exon22	frameshift deletion	c.2925delC
1	SLC12A8	Exon10	stopgain SNV	c.1369G>T
1	SLC12A8	Exon9	frameshift deletion	c.1018delC
1	SLC12A9	Exon8	frameshift deletion	c.1091delG
2	SLC13A1	Exon2	stopgain SNV	c.144G>A
3	SLC13A1	Exon1	stopgain SNV	c.34C>T
1	SLC13A2	Exon11	stopgain SNV	c.1588C>T
3	SLC13A5	Exon8	frameshift deletion	c.1073delC
1	SLC13A5	Exon5	frameshift deletion	c.652delA
19	SLC14A1	Exon4	frameshift deletion	c.110delA
2	SLC14A1	Exon4	frameshift deletion	c.130_131delGA
1	SLC15A1	Exon15	frameshift deletion	c.1147delG
1	SLC16A12	Exon6	frameshift insertion	c.833dupT
1	SLC17A4	Exon2	frameshift insertion	c.36_37insT
1	SLC17A4	Exon2	frameshift deletion	c.38delA
8	SLC17A4	Exon11	stopgain SNV	c.1297C>T

1	SLC17A5	Exon9	frameshift deletion	c.1138_1139delGT
1	SLC17A5	Exon5	frameshift deletion	c.699delT
1	SLC17A7	Exon2	frameshift insertion	c.62dupG
1	SLC17A9	Exon3	frameshift deletion	c.335delA
1	SLC18A1	Exon4	frameshift deletion	c.207_219del CCCACATGCCCTC
2	SLC18A2	Exon4	splicing	c.465-1G>A
1	SLC19A3	Exon2	frameshift deletion	c.128delA
1	SLC1A1	Exon1	stopgain SNV	c.32G>A
1	SLC1A5	Exon8	frameshift insertion	c.1530dupG
12	SLC1A7	Exon5	splicing	c.432-1G>A
1	SLC22A10	Exon3	stopgain SNV	c.514C>T
2	SLC22A10	Exon10	frameshift deletion	c.1607delA
1	SLC22A11	Exon1	stopgain SNV	c.142C>T
3	SLC22A14	Exon2	splicing	c.517-2A>C
1	SLC22A14	Exon3	splicing	c.621-1G>A
19	SLC22A14	Exon3	frameshift deletion	c.713_716delTGTT
1	SLC22A14	Exon3	frameshift insertion	c.748_749insA
1	SLC22A14	Exon3	frameshift deletion	c.762delC
1	SLC22A15	Exon4	frameshift insertion	c.451_452insG
1	SLC22A25	Exon9	frameshift insertion	c.1642_1643insG
1	SLC22A25	Exon9	frameshift insertion	c.1640_1641insG
1	SLC22A25	Exon9	frameshift deletion	c.1397delG
8	SLC22A25	Exon3	splicing	c.403-2A>G
1	SLC22A25	Exon1	frameshift deletion	c.238_245delGACTCAA
3	SLC22A3	Exon3	stopgain SNV	c.537T>A
4	SLC22A9	Exon6	frameshift deletion	c.1005delA
1	SLC22A9	Exon6	frameshift insertion	c.1005dupA
1	SLC23A1	Exon11	splicing	c.1179+2T>C
1	SLC23A1	Exon9	frameshift insertion	c.951_952insC
3	SLC23A2	Exon12	frameshift insertion	c.1233dupC
1	SLC24A6	Exon7	splicing	c.421-2A>G
1	SLC25A13	Exon9	frameshift deletion	c.852_855delTATG
1	SLC25A21	Exon3	stopgain SNV	c.181C>T

1	SLC25A22	Exon5	frameshift deletion	c.204delA
1	SLC25A24	Exon9	frameshift deletion	c.1210delT
1	SLC25A24	Exon9	frameshift deletion	c.1200delG
1	SLC25A24	Exon8	stopgain SNV	c.1071T>A
1	SLC25A2	Exon1	frameshift deletion	c.184_185delGG
1	SLC25A2	Exon1	frameshift insertion	c.132dupC
12	SLC25A2	Exon1	stopgain SNV	c.131dupA
6	SLC25A31	Exon1	stopgain SNV	c.22A>T
1	SLC25A32	Exon6	frameshift deletion	c.769_770delAT
1	SLC25A33	Exon7	frameshift deletion	c.832_833delGG
1	SLC25A45	Exon4	stopgain SNV	c.97C>T
1	SLC25A48	Exon4	stopgain SNV	c.276C>A
7	SLC25A5	Exon2	frameshift insertion	c.197dupG
1	SLC26A10	Exon8	stopgain SNV	c.1100G>A
2	SLC26A10	Exon9	stopgain SNV	c.1206G>A
4	SLC26A10	Exon11	splicing	c.1378+1G>T
1	SLC26A10	Exon13	stopgain SNV	c.1483C>T
1	SLC26A2	Exon2	frameshift deletion	c.190delA
1	SLC26A2	Exon3	frameshift deletion	c.905_906delTC
2	SLC26A4	Exon8	splicing	c.1001+1G>A
1	SLC26A7	Exon18	frameshift deletion	c.1883delC
1	SLC26A8	Exon17	frameshift deletion	c.2001delC
1	SLC26A8	Exon7	stopgain SNV	c.874C>T
1	SLC26A8	Exon4	splicing	c.189-2A>G
1	SLC27A3	Exon2	frameshift deletion	c.970delC
1	SLC27A3	Exon5	frameshift insertion	c.1331_1332insA
1	SLC27A3	Exon9	frameshift deletion	c.1933delC
1	SLC27A6	Exon2	frameshift deletion	c.61_65delAAACT
1	SLC27A6	Exon3	frameshift deletion	c.593delG
1	SLC28A3	Exon5	stopgain SNV	c.261T>A
1	SLC29A4	Exon10	frameshift deletion	c.1428_1432delCCCCA
6	SLC2A11	Exon3	frameshift	c.45delT

			deletion	
1	SLC2A5	Exon5	frameshift insertion	c.542_543insCA
1	SLC2A9	Exon13	stopgain SNV	c.1434T>G
1	SLC30A2	Exon7	stoploss SNV	c.969dupC
1	SLC30A8	Exon5	frameshift deletion	c.141delG
1	SLC30A8	Exon5	stopgain SNV	c.265C>T
1	SLC34A1	Exon7	frameshift deletion	c.684delG
7	SLC34A2	Exon5	stopgain SNV	c.485C>G
2	SLC34A2	Exon11	frameshift deletion	c.1286delT
1	SLC34A2	Exon12	splicing	c.1455+2T>C
1	SLC35B3	Exon8	frameshift insertion	c.857dupT
1	SLC35C2	Exon9	frameshift deletion	c.877delG
1	SLC35C2	Exon2	frameshift deletion	c.9delG
4	SLC35F5	Exon7	frameshift deletion	c.742delT
1	SLC35G3	Exon1	frameshift deletion	c.535delA
1	SLC36A2	Exon2	frameshift deletion	c.175delG
1	SLC36A4	Exon6	frameshift insertion	c.474dupT
6	SLC36A4	Exon4	splicing	c.180-1G>A
1	SLC37A2	Exon14	frameshift deletion	c.1231delG
1	SLC37A4	Exon9	stoploss SNV	c.1287A>C
3	SLC37A4	Exon9	stopgain SNV	c.1276C>T
8	SLC37A4	Exon8	stopgain SNV	c.1063C>T
14	SLC37A4	Exon4	frameshift deletion	c.524delT
1	SLC38A10	Exon13	frameshift insertion	c.1616_1617insT
1	SLC38A10	Exon13	frameshift deletion	c.1612_1613delAT
1	SLC38A6	Exon16	splicing	c.1291-1G>A
1	SLC39A2	Exon4	stopgain SNV	c.662C>A
1	SLC39A4	Exon11	frameshift deletion	c.1785_1786delCC
1	SLC39A5	Exon9	stopgain SNV	c.964C>T
1	SLC39A5	Exon12	frameshift deletion	c.1292delA
1	SLC3A1	Exon4	stopgain SNV	c.808C>T
1	SLC43A3	Exon3	frameshift deletion	c.75_76delCG

1	SLC44A3	Exon5	frameshift deletion	c.443_444delAT
1	SLC44A4	Exon1	frameshift deletion	c.21delC
2	SLC45A2	Exon2	frameshift deletion	c.475_476delAT
1	SLC45A3	Exon5	frameshift deletion	c.1654_1655delTC
1	SLC45A3	Exon5	frameshift deletion	c.1623delA
6	SLC46A1	Exon3	frameshift deletion	c.1144delC
1	SLC47A1	Exon13	frameshift deletion	c.1153delT
1	SLC4A10	Exon13	stopgain SNV	c.1447A>T
1	SLC4A2	Exon2	frameshift deletion	c.4delA
1	SLC4A3	Exon4	frameshift insertion	c.363_364insA
5	SLC4A3	Exon4	frameshift insertion	c.469dupC
1	SLC4A5	Exon27	frameshift insertion	c.2977dupC
1	SLC4A7	Exon7	stopgain SNV	c.1090C>T
1	SLC4A9	Exon1	frameshift deletion	c.172_173delAT
3	SLC5A10	Exon11	stopgain SNV	c.1184C>A
1	SLC5A12	Exon15	frameshift deletion	c.1802delA
1	SLC5A2	Exon5	frameshift deletion	c.506delC
1	SLC5A2	Exon7	stopgain SNV	c.668_669insATAGG
1	SLC5A2	Exon7	frameshift deletion	c.668delT
1	SLC5A2	Exon7	frameshift insertion	c.729_730insT
7	SLC5A4	Exon5	frameshift deletion	c.427delG
8	SLC5A4	Exon5	stopgain SNV	c.415G>T
1	SLC5A6	Exon17	stopgain SNV	c.1863T>G
1	SLC5A6	Exon15	frameshift deletion	c.1585_1591delTGGTACA
2	SLC6A16	Exon10	stopgain SNV	c.1760G>A
1	SLC6A18	Exon5	frameshift insertion	c.667_668insA
1	SLC6A18	Exon6	stopgain SNV	c.745C>T
1	SLC6A19	Exon9	frameshift insertion	c.1178_1179insAG
2	SLC6A19	Exon11	frameshift insertion	c.1680_1681insG
1	SLC6A5	Exon5	frameshift insertion	c.831dupG
1	SLC6A6	Exon9	frameshift deletion	c.1018delT

1	SLC7A13	Exon4	splicing	c.1179+1G>A
1	SLC7A2	Exon5	frameshift deletion	c.699_702delAGAG
8	SLC8A1	Exon5	frameshift insertion	c.2010_2011insAG
5	SLC8A1	Exon5	frameshift deletion	c.1990delG
1	SLC9A11	Exon3	frameshift deletion	c.181delT
2	SLC9A1	Exon4	stopgain SNV	c.1147delC
2	SLC9A4	Exon4	frameshift deletion	c.1061delT
1	SLC9A5	Exon11	frameshift insertion	c.1630_1631insA
1	SLC9A9	Exon14	splicing	c.1470-11_1470-6delTTGTTT
1	SLCO1A2	Exon13	frameshift deletion	c.1517_1518delGT
1	SLCO1A2	Exon6	frameshift deletion	c.382_385delAACA
19	SLCO1B1	Exon7	frameshift deletion	c.645delA
2	SLCO1B1	Exon13	stopgain SNV	c.1738C>T
2	SLCO1B3	Exon3	frameshift insertion	c.204_208dupAATTG
1	SLCO2B1	Exon6	frameshift deletion	c.726_727delTT
1	SLCO4C1	Exon13	stoploss SNV	c.2173T>C
1	SLCO5A1	Exon10	frameshift insertion	c.2523dupC
1	SLCO5A1	Exon2	stopgain SNV	c.886G>T
4	SLCO6A1	Exon1	stopgain SNV	c.281T>G
1	SLFN11	Exon6	stopgain SNV	c.1216C>T
8	SLFN12L	Exon2	frameshift deletion	c.387delC
1	SLFN12	Exon4	frameshift deletion	c.1348_1352delGACAG
1	SLFN13	Exon5	stopgain SNV	c.1605C>A
1	SLFN13	Exon5	frameshift insertion	c.1244dupA
1	SLFN5	Exon4	frameshift insertion	c.1264dupT
2	SLFN5	Exon4	stopgain SNV	c.1510C>T
1	SLFN5	Exon4	frameshift deletion	c.1835delA
1	SLFNL1	Exon5	stopgain SNV	c.1171C>T
1	SLFNL1	Exon5	frameshift insertion	c.1146_1147dupGC
2	SLFNL1	Exon4	frameshift deletion	c.1022delA
1	SLFNL1	Exon2	frameshift deletion	c.420delC

1	SLFNL1	Exon2	stopgain SNV	c.250G>T
1	SLFNL1	Exon2	frameshift deletion	c.145_148delCTCT
1	SLIT1	Exon32	stopgain SNV	c.3555G>A
1	SLIT3	Exon8	stopgain SNV	c.657_658insT
8	SLITRK3	Exon2	stopgain SNV	c.2692G>T
1	SLITRK3	Exon2	stopgain SNV	c.1861G>T
1	SLITRK5	Exon2	frameshift insertion	c.1394_1395insC
1	SLITRK5	Exon2	frameshift insertion	c.2108_2109insCTGG
1	SLITRK6	Exon2	stopgain SNV	c.1687G>T
1	SLMAP	Exon1	frameshift insertion	c.118dupG
2	SLMAP	Exon9	stopgain SNV	c.964A>T
1	SMAD7	Exon4	frameshift insertion	c.871_872insACCC
2	SMAD9	Exon7	stopgain SNV	c.1344G>A
1	SMAP1	Exon7	stopgain SNV	c.656T>G
5	SMAP1	Exon8	frameshift insertion	c.674_675insCC
1	SMAP2	Exon3	splicing	c.323+1G>A
1	SMAP2	Exon7	splicing	c.681+1_681+1delG
1	SMARCA4	Exon5	frameshift deletion	c.815delT
1	SMARCA4	Exon5	frameshift insertion	c.821_822insTT
1	SMARCA4	Exon28	frameshift deletion	c.3925delC
1	SMARCC2	Exon27	frameshift insertion	c.3221dupC
1	SMC1B	Exon17	frameshift deletion	c.2576delG
1	SMC1B	Exon17	frameshift deletion	c.2574delC
1	SMC5	Exon18	frameshift deletion	c.2428_2431delCAGA
1	SMC6	Exon25	stopgain SNV	c.2862T>A
1	SMCHD1	Exon5	frameshift deletion	c.578delA
1	SMCR8	Exon1	stopgain SNV	c.612delC
1	SMCR8	Exon1	frameshift deletion	c.1077delA
1	SMEK1	Exon14	frameshift deletion	c.2032_2033delGA
1	SMEK2	Exon12	splicing	c.1606+2_1606+2delT
1	SMG1	Exon45	frameshift deletion	c.7299delT
1	SMG1	Exon7	splicing	c.609-10_609-6delATAAA

2	SMG5	Exon16	frameshift deletion	c.2425delC
1	SMG6	Exon2	frameshift insertion	c.1511dupC
6	SMG6	Exon2	stopgain SNV	c.847C>T
1	SMOC2	Exon9	frameshift deletion	c.825delG
1	SMOC2	Exon9	frameshift insertion	c.828_829insT
1	SMOC2	Exon9	frameshift deletion	c.836_837delCG
1	SMOX	Exon3	frameshift deletion	c.375delC
1	SMPD3	Exon3	frameshift insertion	c.477_478insG
1	SMPD4	Exon18	frameshift insertion	c.2075_2076insCA
1	SMPD4	Exon18	frameshift insertion	c.2073_2074insCC
7	SMPD4	Exon15	stopgain SNV	c.1519C>T
1	SMPDL3B	Exon5	frameshift deletion	c.644_645delAG
1	SMPDL3B	Exon6	frameshift insertion	c.793_794insC
1	SMPDL3B	Exon6	frameshift insertion	c.797dupA
1	SMR3B	Exon3	frameshift insertion	c.155dupC
1	SMTNL1	Exon6	stopgain SNV	c.1220G>A
1	SMTNL2	Exon3	splicing	c.298+1G>T
1	SMTN	Exon11	frameshift insertion	c.1605dupC
1	SMTN	Exon20	frameshift deletion	c.2665_2666delGA
1	SMUG1	Exon3	stopgain SNV	c.7C>T
1	SMYD4	Exon9	splicing	c.1885-1G>A
3	SMYD4	Exon5	stopgain SNV	c.415G>T
1	SMYD5	Exon7	frameshift insertion	c.688_689insT
1	SMYD5	Exon8	frameshift deletion	c.708_709delGT
1	SNAP29	Exon1	stopgain SNV	c.5C>G
2	SNAPC1	Exon4	frameshift deletion	c.468_469delAA
3	SNAPC1	Exon9	frameshift deletion	c.1015delA
1	SNAPC2	Exon5	frameshift insertion	c.839_840insC
1	SNAPC5	Exon3	stopgain SNV	c.280G>T
1	SNAPIN	Exon4	stopgain SNV	c.313C>T
1	SNED1	Exon2	frameshift insertion	c.384_385insT

1	SNED1	Exon11	frameshift deletion	c.1546_1547delGA
1	SNRNP200	Exon43	frameshift deletion	c.6120delG
2	SNRNP200	Exon30	frameshift deletion	c.4055delC
1	SNRNP35	Exon2	frameshift insertion	c.437dupG
1	SNRPB2	Exon4	splicing	c.378+1G>T
5	SNRPB	Exon2	stopgain SNV	c.22A>T
20	SNRPC	Exon4	splicing	c.250+2T>G
1	SNTB1	Exon3	stopgain SNV	c.961C>T
1	SNTG2	Exon3	frameshift insertion	c.223dupA
1	SNTG2	Exon3	frameshift insertion	c.251dupT
1	SNTG2	Exon13	stopgain SNV	c.1027C>T
1	SNUPN	Exon3	frameshift deletion	c._del
1	SNX14	Exon12	stopgain SNV	c.1108G>T
2	SNX17	Exon13	stopgain SNV	c.1231C>T
1	SNX18	Exon1	stopgain SNV	c.1631G>A
1	SNX19	Exon1	stopgain SNV	c.289C>T
1	SNX25	Exon9	frameshift deletion	c.1020delG
1	SNX29	Exon13	frameshift insertion	c.1479_1480insT
1	SNX29	Exon20	stopgain SNV	c.2281A>T
2	SNX31	Exon10	frameshift deletion	c.801delG
1	SNX32	Exon5	frameshift deletion	c.471_474delCTTT
2	SNX5	Exon12	splicing	c.832-1G>T
1	SOAT2	Exon7	stopgain SNV	c.732C>G
1	SOAT2	Exon13	stopgain SNV	c.1255C>T
1	SOAT2	Exon15	stopgain SNV	c.1546C>T
1	SOC55	Exon2	stopgain SNV	c.703C>T
3	SORBS1	Exon21	stopgain SNV	c.1759G>T
1	SORD	Exon8	splicing	c.908+2T>C
1	SORL1	Exon34	frameshift deletion	c.4767delT
2	SORL1	Exon47	frameshift deletion	c.6365delG
1	SORL1	Exon47	frameshift deletion	c.6366delT
2	SORL1	Exon47	frameshift deletion	c.6370delG

1	SORL1	Exon47	frameshift deletion	c.6377delC
10	SOS1	Exon3	frameshift insertion	c.256dupG
1	SOS2	Exon18	frameshift insertion	c.2822_2823insA
3	SOSTDC1	Exon2	frameshift deletion	c.592delA
1	SOX10	Exon4	stopgain SNV	c.1281T>G
1	SOX11	Exon1	frameshift deletion	c.159delG
1	SP100	Exon17	splicing	c.1600+2_1600+5delTAAG
1	SP110	Exon9	stopgain SNV	c.1030C>T
1	SPAG16	Exon6	stopgain SNV	c.601C>T
1	SPAG17	Exon1	frameshift deletion	c.37delA
1	SPAG4	Exon8	frameshift deletion	c.720_721delAG
2	SPAG8	Exon3	stopgain SNV	c.928C>T
7	SPANXN2	Exon1	frameshift deletion	c.71delA
1	SPATA16	Exon7	stopgain SNV	c.1202C>G
1	SPATA16	Exon6	stopgain SNV	c.1066G>T
1	SPATA20	Exon6	frameshift deletion	c.587delG
1	SPATA20	Exon7	frameshift deletion	c.710_711delCT
1	SPATA20	Exon17	frameshift deletion	c.2301delT
1	SPATA21	Exon13	stopgain SNV	c.1399C>T
1	SPATA3	Exon3	frameshift deletion	c.570delA
1	SPATA4	Exon2	frameshift deletion	c.331_332delTG
1	SPATA5	Exon5	stopgain SNV	c.1073delT
1	SPATA5	Exon9	frameshift deletion	c.1496delC
1	SPATA7	Exon12	stopgain SNV	c.1553C>A
3	SPATA8	Exon3	splicing	c.197-1G>A
1	SPATA8	Exon3	frameshift deletion	c.206delG
2	SPDYE1	Exon6	frameshift deletion	c.979delG
1	SPDYE3	Exon6	frameshift deletion	c.1014_1015delGG
6	SPECC1	Exon9	frameshift deletion	c.2526delT
1	SPEF2	Exon32	frameshift deletion	c.4638delG
1	SPEN	Exon11	frameshift deletion	c.9766_9767delCC

1	SPERT	Exon3	stopgain SNV	c.857C>A
1	SPG20	Exon9	stoploss SNV	c.1999T>A
1	SPG7	Exon12	splicing	c.1553-2_1553-1delAG
1	SPHKAP	Exon7	frameshift deletion	c.3420delA
1	SPHKAP	Exon7	frameshift deletion	c.3417delT
1	SPHKAP	Exon7	frameshift deletion	c.3356_3357delAG
1	SPHKAP	Exon7	frameshift deletion	c.1730_1731delAA
1	SPICE1	Exon14	frameshift deletion	c.1955delA
1	SPICE1	Exon14	stopgain SNV	c.1906C>T
1	SPIN2A	Exon2	frameshift deletion	c.573delA
2	SPIN3	Exon2	frameshift deletion	c.733delG
1	SPIN3	Exon2	frameshift deletion	c.719delT
1	SPIN3	Exon2	frameshift insertion	c.716_717insT
9	SPINK14	Exon2	frameshift deletion	c.99delT
1	SPINK7	Exon3	splicing	c.212+1G>C
1	SPINT4	Exon1	frameshift deletion	c.27delT
2	SPNS3	Exon3	stopgain SNV	c.319C>T
1	SPNS3	Exon9	frameshift insertion	c.1146dupC
1	SPOCD1	Exon9	frameshift deletion	c.2090_2099delCGATGCAGCT
1	SPOCD1	Exon2	frameshift deletion	c.1293delC
1	SPOCK3	Exon7	frameshift deletion	c.381_382delAT
1	SPON1	Exon15	stopgain SNV	c.2134G>T
1	SPPL2A	Exon3	splicing	c.177+1G>A
1	SPRED3	Exon5	stopgain SNV	c.611C>A
1	SPR	Exon3	stopgain SNV	c.751A>T
1	SPRR1B	Exon2	frameshift deletion	c.183delT
1	SPRR2G	Exon2	stoploss SNV	c.220T>C
1	SPRY1	Exon2	frameshift insertion	c.371_372insA
1	SPRYD5	Exon2	splicing	c.411+1G>T
1	SPTAN1	Exon29	frameshift deletion	c.3681delG
1	SPTBN1	Exon16	frameshift deletion	c.3215delA
1	SPTBN5	Exon41	frameshift deletion	c.7026delC

1	SPTBN5	Exon5	frameshift insertion	c.524_525insC
1	SPTBN5	Exon2	stopgain SNV	c.109C>T
1	SPTLC1	Exon4	frameshift deletion	c.338delA
1	SPTLC1	Exon2	stopgain SNV	c.139C>T
1	SPTLC2	Exon8	frameshift deletion	c.1136delA
7	SPZ1	Exon1	frameshift insertion	c.1170dupA
1	SRBD1	Exon3	stopgain SNV	c.253G>T
2	SRCAP	Exon25	frameshift insertion	c.5633dupC
1	SRD5A2	Exon5	splicing	c.547-2A>C
2	SRD5A3	Exon5	frameshift deletion	c.925_926delCA
1	SRD5A3	Exon5	frameshift insertion	c.945dupA
1	SREBF2	Exon5	frameshift deletion	c.978delC
3	SREK1IP1	Exon4	frameshift deletion	c.231delG
1	SREK1	Exon5	frameshift deletion	c.719_720delCT
1	SRFBP1	Exon3	frameshift insertion	c.152dupA
2	SRFBP1	Exon8	frameshift insertion	c.1110dupT
1	SRFBP1	Exon8	frameshift deletion	c.1273delA
2	SRGAP2	Exon1	stopgain SNV	c.136C>T
1	SRGAP2	Exon15	stopgain SNV	c.1813C>T
1	SRGAP2	Exon17	stopgain SNV	c.1933C>T
1	SRGAP3	Exon3	frameshift deletion	c.373delA
1	SRL	Exon6	stopgain SNV	c.1050C>G
1	SRP54	Exon6	frameshift deletion	c.294delA
1	SRPK2	Exon10	splicing	c.813+1G>T
1	SRPRB	Exon8	frameshift insertion	c.816dupA
2	SRPX2	Exon5	stopgain SNV	c.459C>A
1	SRPX	Exon3	frameshift insertion	c.172_173insTA
1	SRRD	Exon5	splicing	c.764+2dupT
1	SRRD	Exon7	frameshift deletion	c.981delC
7	SRRM3	Exon15	frameshift insertion	c.1737dupC
1	SRRM5	Exon1	frameshift insertion	c.700_701insGG
1	SRR	Exon5	frameshift	c.423_424delAG

			deletion	
2	SRRT	Exon4	frameshift insertion	c.311dupG
4	SS18	Exon5	stopgain SNV	c.481G>T
1	SSH1	Exon15	frameshift deletion	c.2009delA
1	SSH3	Exon14	frameshift insertion	c.1949dupT
1	SSPO	Exon7	frameshift deletion	c.889delG
1	SSPO	Exon9	frameshift insertion	c.1122dupC
12	SSPO	Exon57	frameshift deletion	c.8753_8756delGATA
11	SSPO	Exon60	frameshift insertion	c.9212dupC
2	SSPO	Exon76	stopgain SNV	c.11434C>T
1	SSPO	Exon76	frameshift deletion	c.11590delA
1	SSTR1	Exon3	frameshift insertion	c.1064_1065insT
1	SSU72	Exon4	stopgain SNV	c.477C>A
1	SSX5	Exon8	splicing	c.589+1G>A
1	ST14	Exon15	frameshift insertion	c.1760_1761insGG
1	ST18	Exon15	frameshift deletion	c.1727delC
3	ST20	Exon3	frameshift insertion	c.66_67insT
1	ST3GAL2	Exon7	stopgain SNV	c.1027A>T
1	ST3GAL2	Exon3	frameshift deletion	c.432_433delGG
1	ST3GAL5	Exon3	frameshift insertion	c.220_221insAA
1	ST3GAL6	Exon9	frameshift deletion	c.626_627delAA
1	ST6GALNAC1	Exon8	splicing	c.1505+2T>C
1	ST6GALNAC1	Exon5	frameshift deletion	c.1227delC
1	ST6GALNAC6	Exon2	frameshift insertion	c.21dupC
1	ST7L	Exon5	frameshift insertion	c.605dupT
1	STAB1	Exon56	frameshift deletion	c.5964_5965delCA
1	STAB1	Exon56	frameshift deletion	c.5968delA
2	STAB2	Exon34	frameshift deletion	c.3583delG
1	STAC3	Exon5	frameshift deletion	c.479delA
1	STAC	Exon8	frameshift deletion	c.891delA
2	STAG1	Exon19	stopgain SNV	c.2030T>A
1	STAG3	Exon7	frameshift	c.611_612insTT

			insertion	
5	STAG3	Exon25	stopgain SNV	c.2605C>T
1	STAP2	Exon6	stopgain SNV	c.507C>G
3	STARD13	Exon9	frameshift deletion	c.1572delT
1	STARD13	Exon9	frameshift deletion	c.1571delA
3	STARD13	Exon9	frameshift deletion	c.818delA
1	STARD4	Exon6	stopgain SNV	c.604C>T
14	STARD4	Exon4	splicing	c.155+1G>A
1	STARD4	Exon3	stopgain SNV	c.139G>T
1	STARD6	Exon4	stopgain SNV	c.360C>G
1	STARD6	Exon4	stopgain SNV	c.341T>G
16	STARD6	Exon1	stopgain SNV	c.55C>T
1	STAT2	Exon20	frameshift deletion	c.1729delA
1	STAT3	Exon9	frameshift deletion	c.911delT
1	STAT4	Exon4	frameshift deletion	c.360delC
1	STAT5A	Exon10	frameshift insertion	c.1102dupC
1	STATH	Exon4	splicing	c.102+2dupT
2	STBD1	Exon2	frameshift insertion	c.610_611insAC
1	STBD1	Exon2	stopgain SNV	c.636G>A
1	STBD1	Exon2	frameshift deletion	c.827delC
1	STEAP4	Exon3	stopgain SNV	c.952C>T
1	STEAP4	Exon3	stopgain SNV	c.691A>T
1	STEAP4	Exon3	stopgain SNV	c.541G>T
1	STIL	Exon12	frameshift insertion	c.2103_2104insC
2	STIP1	Exon8	splicing	c.903-1G>A
1	STK19	Exon1	stopgain SNV	c.50G>A
2	STK31	Exon24	stopgain SNV	c.2936C>G
1	STK32A	Exon4	stopgain SNV	c.190G>T
1	STK32B	Exon1	frameshift deletion	c.8_14delGGAACCA
6	STK33	Exon14	frameshift insertion	c.1512_1513insT
6	STK33	Exon14	frameshift insertion	c.1511_1512insTGGTT
1	STK36	Exon24	frameshift deletion	c.2717_2718delGC

1	STMN3	Exon3	frameshift deletion	c.227delA
1	STOML3	Exon5	stopgain SNV	c.490C>T
2	STON1-GTF2A1L	Exon2	frameshift insertion	c.773dupA
2	STOX1	Exon3	stopgain SNV	c.1672A>T
1	STRC	Exon21	splicing	c.3931-1G>C
7	STRN4	Exon11	splicing	c.1270-1G>C
1	STRN4	Exon5	frameshift deletion	c.677_678delCT
3	STX18	Exon8	splicing	c.614-1_614-1delG
1	STX3	Exon8	stopgain SNV	c.589C>T
1	STX5	Exon2	frameshift insertion	c.131dupC
1	STX6	Exon5	stopgain SNV	c.433C>T
1	STX6	Exon3	splicing	c.205+1A>G
1	STXBP3	Exon19	stopgain SNV	c.1729A>T
1	STXBP5L	Exon5	stopgain SNV	c.469C>T
1	STYXL1	Exon5	frameshift insertion	c.401dupT
2	SULF1	Exon6	frameshift insertion	c.465dupG
1	SULT1A1	Exon3	splicing	c.138+1G>C
1	SULT1C2	Exon2	stopgain SNV	c.28C>T
10	SULT1C3	Exon1	stopgain SNV	c.108G>A
7	SULT1C4	Exon2	stopgain SNV	c.253C>T
1	SULT1E1	Exon5	frameshift deletion	c.448_449delAA
1	SULT2A1	Exon2	stopgain SNV	c.190A>T
1	SUMF2	Exon2	frameshift deletion	c.33_34delTT
1	SUN1	Exon8	frameshift deletion	c.726_727delCA
1	SUN1	Exon16	frameshift deletion	c.1775delA
1	SUN2	Exon6	stopgain SNV	c.612G>A
1	SUOX	Exon6	stoploss SNV	c.1636T>A
1	SUPT3H	Exon9	frameshift deletion	c.594_595delAA
3	SUPT6H	Exon17	stopgain SNV	c.2055T>G
5	SUPT6H	Exon32	stopgain SNV	c.4399G>T
1	SUSD2	Exon11	frameshift insertion	c.1754dupC
1	SUSD2	Exon12	frameshift insertion	c.1939dupC

1	SUSD2	Exon12	frameshift deletion	c.1949_1950delAA
1	SUSD2	Exon12	frameshift deletion	c.1954delC
3	SUSD2	Exon13	stopgain SNV	c.2265C>A
1	SUSD3	Exon2	splicing	c.277+1G>A
1	SUSD3	Exon5	stopgain SNV	c.742C>T
1	SUV420H1	Exon11	frameshift deletion	c.1581delG
1	SUZ12	Exon16	frameshift deletion	c.2174_2177delATAG
1	SV2A	Exon2	frameshift insertion	c.358dupG
1	SVEP1	Exon18	stopgain SNV	c.3189C>G
1	SVIL	Exon27	stopgain SNV	c.3907G>T
1	SVIL	Exon26	frameshift deletion	c.3776_3777delTG
1	SVOPL	Exon10	stopgain SNV	c.964delG
5	SVOPL	Exon6	stopgain SNV	c.508C>T
1	SYCP1	Exon23	frameshift deletion	c.1884delA
1	SYCP1	Exon32	frameshift deletion	c.2901delA
1	SYCP2L	Exon4	stopgain SNV	c.271C>T
1	SYCP2L	Exon16	frameshift deletion	c.1257delT
2	SYCP2	Exon23	stopgain SNV	c.2362delA
1	SYCP2	Exon21	splicing	c.1735+2T>C
2	SYDE2	Exon7	frameshift deletion	c.3423delC
1	SYN3	Exon11	stopgain SNV	c.1144C>T
1	SYNC	Exon3	frameshift insertion	c.1284dupG
1	SYNE1	Exon143	frameshift deletion	c.25836delG
11	SYNE1	Exon126	stopgain SNV	c.22918G>T
6	SYNE1	Exon77	stopgain SNV	c.12649C>T
4	SYNE1	Exon76	frameshift deletion	c.12454_12455delCA
1	SYNE1	Exon58	stopgain SNV	c.9273dupT
1	SYNE1	Exon33	frameshift insertion	c.4235dupA
1	SYNE2	Exon39	stopgain SNV	c.5825T>A
13	SYNE2	Exon61	stopgain SNV	c.12002G>A
1	SYNGR4	Exon3	splicing	c.331+1G>T
1	SYNGR4	Exon5	frameshift	c.654_655delCT

			deletion	
3	SYNM	Exon4	stopgain SNV	c.2238G>A
1	SYNM	Exon4	frameshift deletion	c.2732delT
1	SYNPO2L	Exon4	frameshift insertion	c.2121dupT
1	SYNPO2L	Exon4	frameshift insertion	c.2120dupC
1	SYT12	Exon4	frameshift deletion	c.287delG
2	SYT14	Exon7	frameshift deletion	c.957delA
1	SYT15	Exon3	splicing	c.212+1G>C
2	SYT17	Exon3	stopgain SNV	c.70A>T
1	SYT5	Exon8	frameshift insertion	c.866dupA
1	SYTL1	Exon10	splicing	c.909-1G>T
1	SYTL2	Exon9	splicing	c.1459+1G>A
1	SYTL3	Exon19	stoploss SNV	c.1833A>T
5	SZT2	Exon27	frameshift deletion	c.3878delC
1	SZT2	Exon38	splicing	c.5360-2A>C
18	TAAR2	Exon2	stopgain SNV	c.503G>A
1	TAAR2	Exon2	stopgain SNV	c.324C>A
1	TAAR8	Exon1	frameshift deletion	c.749_750delAA
1	TAAR9	Exon1	frameshift deletion	c.273delG
4	TAC4	Exon2	frameshift deletion	c._del
1	TACC2	Exon4	stopgain SNV	c.493C>T
1	TACC2	Exon4	frameshift insertion	c.4319_4320insG
1	TACR2	Exon5	frameshift insertion	c.997_998insC
1	TADA2B	Exon2	frameshift deletion	c.318_319delGA
1	TADA2B	Exon2	frameshift insertion	c.877_878insA
4	TAF1A	Exon11	splicing	c.1086-1G>A
1	TAF1B	Exon6	frameshift deletion	c.454delA
1	TAF1C	Exon8	stopgain SNV	c.829C>T
1	TAF2	Exon18	splicing	c.2113-1G>A
1	TAF3	Exon3	stopgain SNV	c.1473T>G
1	TAF6	Exon4	frameshift deletion	c.480_481delCC
2	TAF6	Exon2	frameshift deletion	c.75delG
1	TAF8	Exon8	stopgain SNV	c.839C>A

1	TALDO1	Exon2	frameshift deletion	c.210delG
11	TANC2	Exon16	stopgain SNV	c.2938C>T
1	TAOK3	Exon20	frameshift deletion	c.2519delC
1	TARBP1	Exon6	frameshift deletion	c.1394_1397delTAAA
1	TARBP1	Exon6	splicing	c.1249-12_1249-3del TTTTTTTTT
1	TARBP1	Exon2	stopgain SNV	c.1009G>T
1	TARBP2	Exon7	splicing	c.614-1G>C
2	TARSL2	Exon16	frameshift deletion	c.2051_2052delCA
1	TAS1R2	Exon4	stopgain SNV	c.1414C>T
1	TAS2R14	Exon1	frameshift deletion	c.350_351delCT
3	TAS2R16	Exon1	frameshift deletion	c.507delA
5	TAS2R19	Exon1	stopgain SNV	c.885G>A
1	TAS2R19	Exon1	stopgain SNV	c.763C>T
1	TAS2R19	Exon1	stopgain SNV	c.418delC
1	TAS2R30	Exon1	stopgain SNV	c.180G>A
1	TAS2R31	Exon1	frameshift deletion	c.703delC
1	TAS2R41	Exon1	stopgain SNV	c.267G>A
1	TAS2R41	Exon1	frameshift insertion	c.377dupT
1	TAS2R46	Exon1	stopgain SNV	c.862C>T
1	TAS2R46	Exon1	frameshift deletion	c.553_554delTT
6	TAS2R46	Exon1	frameshift deletion	c.262delT
3	TAS2R60	Exon1	stoploss SNV	c.957A>T
1	TAS2R7	Exon1	stopgain SNV	c.640C>T
17	TAS2R8	Exon1	frameshift insertion	c.734dupT
2	TAS2R8	Exon1	stopgain SNV	c.46G>T
19	TATDN3	Exon9	splicing	c.601-1G>A
3	TAZ	Exon6	splicing	c.452-2A>T
1	TBC1D15	Exon14	stopgain SNV	c.1564G>T
1	TBC1D17	Exon4	frameshift deletion	c.316delG
1	TBC1D24	Exon4	frameshift deletion	c.986_987delAG
1	TBC1D28	Exon7	stopgain SNV	c.232_233insAA
2	TBC1D28	Exon8	splicing	c.199-1G>C

19	TBC1D29	Exon2	splicing	c.13-1G>A
1	TBC1D3H	Exon14	frameshift insertion	c.1484dupC
1	TBC1D5	Exon20	stopgain SNV	c.1879G>T
1	TBC1D8	Exon20	frameshift insertion	c.3418_3419dupTT
1	TBC1D8	Exon20	frameshift deletion	c.3056_3057delCA
1	TBC1D9B	Exon8	stopgain SNV	c.1321C>T
1	TBCCD1	Exon6	frameshift insertion	c.1454dupG
1	TBCCD1	Exon5	frameshift insertion	c.992dupA
1	TBCC	Exon1	frameshift deletion	c.805_806delAC
1	TBCC	Exon1	frameshift deletion	c.634delA
1	TBCD	Exon19	stopgain SNV	c.1738C>T
1	TBCD	Exon20	frameshift insertion	c.1853_1854insC
3	TBCK	Exon24	frameshift deletion	c.2327delT
1	TBCK	Exon24	splicing	c.2060-2A>G
1	TBKBP1	Exon2	stopgain SNV	c.304G>T
2	TBR1	Exon5	frameshift insertion	c.1173dupT
1	TBX10	Exon7	frameshift insertion	c.849_850insA
1	TBX19	Exon6	stopgain SNV	c.856C>T
1	TBX6	Exon4	frameshift deletion	c.432delT
1	TCEANC	Exon4	stopgain SNV	c.841C>T
1	TCEB3B	Exon1	frameshift deletion	c.1715_1718delAAGA
1	TCEB3B	Exon1	stopgain SNV	c.998C>A
12	TCEB3CL	Exon1	frameshift insertion	c.1272_1273dupGC
11	TCEB3CL	Exon1	frameshift insertion	c.1272_1273dupGC
1	TCEB3	Exon4	frameshift insertion	c.765_766insCG
1	TCF12	Exon5	stopgain SNV	c.246C>G
1	TCF12	Exon19	stopgain SNV	c.1978G>T
1	TCF3	Exon8	frameshift insertion	c.529_530insTT
4	TCHHL1	Exon3	stopgain SNV	c.1966C>T
1	TCHHL1	Exon3	stopgain SNV	c.880C>T
1	TCHHL1	Exon3	frameshift insertion	c.500dupA

1	TCHH	Exon2	stopgain SNV	c.4756C>T
6	TCHH	Exon2	stopgain SNV	c.4204C>T
1	TCHH	Exon2	frameshift insertion	c.885_886insT
1	TCHH	Exon1	frameshift deletion	c.1delA
1	TCHP	Exon11	splicing	c.1320+2T>A
1	TCIRG1	Exon15	splicing	c.1674-1G>A
1	TCN1	Exon2	frameshift deletion	c.172delG
2	TCN2	Exon2	stopgain SNV	c.97A>T
1	TCOF1	Exon18	splicing	c.3046+2T>C
11	TCP10L2	Exon5	stopgain SNV	c.583C>T
12	TCP10L2	Exon8	stopgain SNV	c.958C>T
1	TCP11L2	Exon8	splicing	c.1142+1G>A
1	TCP11	Exon8	splicing	c.972+1G>A
1	TCP1	Exon4	frameshift deletion	c.313delG
1	TCTN1	Exon11	frameshift deletion	c.1242delG
1	TCTN1	Exon11	frameshift deletion	c.1248delA
3	TDG	Exon3	frameshift insertion	c.292dupA
1	TDP1	Exon13	splicing	c.1433+1_1433+1delG
1	TDRD5	Exon2	frameshift deletion	c.129delA
2	TDRD6	Exon1	stopgain SNV	c.484C>T
2	TDRD6	Exon1	stopgain SNV	c.5653A>T
3	TEAD2	Exon11	frameshift deletion	c.1183delG
1	TEAD2	Exon9	frameshift insertion	c.883dupC
1	TECTA	Exon20	frameshift deletion	c.6081_6082delTT
2	TEKT1	Exon8	frameshift deletion	c.1222delT
1	TEKT1	Exon5	splicing	c.357-1G>A
1	TEKT3	Exon3	stopgain SNV	c.35dupA
1	TEKT4	Exon5	frameshift deletion	c.964delC
2	TEKT4	Exon5	stopgain SNV	c.1070_1071insA
4	TEN1	Exon2	stopgain SNV	c.27T>G
6	TENC1	Exon12	frameshift deletion	c.490delA
1	TEP1	Exon46	frameshift insertion	c.6645dupG
1	TEP1	Exon42	frameshift deletion	c.6106delC

1	TERF2IP	Exon3	stopgain SNV	c.1090C>T
1	TEX101	Exon4	splicing	c.15+2T>C
1	TEX13B	Exon3	splicing	c.459+1G>A
5	TEX13B	Exon2	stopgain SNV	c.382C>T
2	TEX14	Exon27	splicing	c.3818-1G>A
1	TEX14	Exon14	splicing	c.1528-1G>C
1	TEX14	Exon7	stopgain SNV	c.753C>A
1	TEX15	Exon3	stopgain SNV	c.8325G>A
1	TEX15	Exon1	frameshift insertion	c.6933dupA
1	TEX15	Exon1	stopgain SNV	c.3869T>G
1	TEX15	Exon1	stopgain SNV	c.547C>T
1	TEX2	Exon2	frameshift deletion	c.679delC
1	TFDP1	Exon10	splicing	c.1006+1G>T
1	TFDP3	Exon1	stopgain SNV	c.405_406insT
2	TFDP3	Exon1	stopgain SNV	c.394G>T
1	TF	Exon4	splicing	c.502+1G>T
2	TF	Exon16	frameshift deletion	c.1980delT
1	TFR2	Exon14	frameshift deletion	c.1667delG
1	TFR2	Exon11	frameshift deletion	c.1394delT
1	TFR2	Exon10	frameshift deletion	c.1304_1305delCA
1	TFR2	Exon10	frameshift deletion	c.1302delT
1	TFR2	Exon8	stopgain SNV	c.976G>T
14	TGFBR2	Exon3	frameshift deletion	c.383delA
1	TGM1	Exon7	splicing	c.877-2A>G
14	TGM3	Exon4	frameshift deletion	c.488delT
5	TGM4	Exon7	stopgain SNV	c.806G>A
1	TGM5	Exon3	frameshift insertion	c.289_290insA
1	TGM6	Exon3	frameshift deletion	c.257delC
1	TGM6	Exon3	frameshift deletion	c.262_263delGC
1	TGM6	Exon3	frameshift deletion	c.273delT
1	TGM7	Exon4	splicing	c.439+2T>G
1	TGOLN2	Exon2	frameshift deletion	c.1131_1132delTG
3	TGS1	Exon1	stopgain SNV	c.13A>T

1	TH1L	Exon13	frameshift deletion	c.1600delG
1	THADA	Exon33	stopgain SNV	c.4911G>A
1	THADA	Exon10	frameshift insertion	c.911dupA
1	THADA	Exon2	frameshift deletion	c.22_25delGAAA
1	THAP5	Exon3	frameshift deletion	c.801_804delTAAA
1	THAP6	Exon5	frameshift deletion	c.668_766del
1	THAP9	Exon5	frameshift deletion	c.2584_2585delAG
1	THBS1	Exon13	frameshift deletion	c.2087delA
1	THBS2	Exon18	frameshift deletion	c.2735delG
1	THNSL1	Exon3	stopgain SNV	c.16C>T
1	THNSL1	Exon3	frameshift deletion	c.2130_2133delGAGA
1	THNSL2	Exon2	frameshift deletion	c.214_218delGAATT
1	THNSL2	Exon4	frameshift insertion	c.515_516insTC
1	THNSL2	Exon5	frameshift deletion	c.758delT
2	THNSL2	Exon5	splicing	c.802+2T>C
1	THOC5	Exon13	splicing	c.1067-1G>T
2	THRAP3	Exon6	stopgain SNV	c.1804A>T
2	THSD1	Exon4	frameshift deletion	c.1899delG
1	THSD4	Exon6	frameshift deletion	c.1044delC
1	THSD7A	Exon15	splicing	c.3246+2T>G
16	THSD7B	Exon10	splicing	c.2303+2C>T
1	THSD7B	Exon25	stopgain SNV	c.4532T>G
1	THUMPD2	Exon5	splicing	c.750+1G>T
1	THY1	Exon3	frameshift deletion	c.187delC
16	TIAL1	Exon7	stopgain SNV	c.481C>T
1	TIAM1	Exon6	frameshift deletion	c.1018delA
1	TIAM2	Exon15	splicing	c.3169-2dupA
1	TIAM2	Exon26	stopgain SNV	c.4568T>A
1	TICAM2	Exon2	frameshift deletion	c.292_293delAA
1	TIE1	Exon6	frameshift deletion	c.844delA
3	TIE1	Exon16	stopgain SNV	c.2659G>T
7	TIE1	Exon17	frameshift deletion	c.2821_2824delTTTG
1	TIE1	Exon21	stopgain	c.3193A>T

			SNV	
1	TIGD4	Exon2	frameshift deletion	c.1043_1044delTT
3	TIGD4	Exon2	stopgain SNV	c.841C>T
1	TIGD6	Exon2	frameshift deletion	c.1211_1212delCA
11	TIGD6	Exon2	frameshift deletion	c.191delG
1	TIMD4	Exon2	frameshift deletion	c.66delC
1	TIMD4	Exon2	frameshift deletion	c.60delA
1	TINAG	Exon1	stopgain SNV	c.323G>A
1	TIPIN	Exon5	stopgain SNV	c.349A>T
1	TJAP1	Exon9	stopgain SNV	c.439delC
1	TK2	Exon5	frameshift insertion	c.372_373dupAA
1	TKTL2	Exon1	frameshift deletion	c.186_189delAGAC
1	TLCD1	Exon4	frameshift deletion	c.581_582delAA
1	TLCD1	Exon4	frameshift deletion	c.376delT
1	TLE1	Exon17	stopgain SNV	c.1957C>T
1	TLE2	Exon17	frameshift deletion	c.1654delC
1	TLE3	Exon16	frameshift deletion	c.1762delG
1	TLN2	Exon17	frameshift deletion	c.2017delA
1	TLR10	Exon3	stopgain SNV	c.2272C>T
1	TLR10	Exon3	frameshift deletion	c.451delC
2	TLR1	Exon4	frameshift deletion	c.995_996delCA
1	TLR2	Exon3	stopgain SNV	c.1059T>A
1	TLR2	Exon3	stopgain SNV	c.1067C>G
1	TLR2	Exon3	stopgain SNV	c.1339C>T
1	TLR5	Exon6	stopgain SNV	c.773T>A
4	TLR7	Exon3	stopgain SNV	c.2176A>T
1	TM4SF4	Exon1	frameshift insertion	c.40dupC
2	TM7SF2	Exon8	splicing	c.973+2T>G
2	TMBIM4	Exon5	frameshift deletion	c.420_421delGT
1	TMBIM4	Exon2	frameshift insertion	c.170dupT
1	TMC2	Exon7	splicing	c.728-1G>T
1	TMC2	Exon11	stopgain	c.1360C>T

			SNV	
4	TMC2	Exon16	splicing	c.1941-2A>T
11	TMC3	Exon22	stopgain SNV	c.3134C>A
1	TMC3	Exon15	splicing	c.1647+2dupT
1	TMC3	Exon9	frameshift deletion	c.922_926delAAAAG
4	TMC7	Exon16	stopgain SNV	c.2127C>A
1	TMCO2	Exon2	frameshift deletion	c.480delT
9	TMCO3	Exon2	stopgain SNV	c.13G>T
1	TMCO4	Exon15	frameshift deletion	c.1402_1403delTT
2	TMED3	Exon1	splicing	c.168+1G>A
1	TMED4	Exon3	splicing	c.261+2T>C
2	TMEM104	Exon5	splicing	c.250-2_250-1delAG
1	TMEM104	Exon8	splicing	c.528-1G>T
1	TMEM104	Exon10	stopgain SNV	c.1284C>A
1	TMEM115	Exon2	frameshift deletion	c.1012delG
4	TMEM120A	Exon2	stoploss SNV	c.130T>C
2	TMEM132B	Exon2	stopgain SNV	c.308T>A
1	TMEM132E	Exon10	frameshift insertion	c.2185_2186insGT
1	TMEM133	Exon1	frameshift deletion	c.117delC
1	TMEM133	Exon1	frameshift deletion	c.218delT
1	TMEM144	Exon11	splicing	c.900+1G>A
2	TMEM145	Exon14	frameshift deletion	c.1248delG
1	TMEM146	Exon3	stopgain SNV	c.181A>T
1	TMEM146	Exon18	splicing	c.1634+2_1634+5delTAAG
1	TMEM150A	Exon6	frameshift insertion	c.325_326insC
3	TMEM150C	Exon8	stopgain SNV	c.716C>A
4	TMEM150C	Exon8	frameshift deletion	c.714delG
2	TMEM159	Exon5	frameshift deletion	c.465_466delCG
1	TMEM161B	Exon9	frameshift deletion	c.844delC
1	TMEM168	Exon2	stopgain SNV	c.36T>A
1	TMEM170A	Exon2	frameshift insertion	c.139_140dupTG
1	TMEM171	Exon2	stopgain SNV	c.628C>T
1	TMEM176B	Exon8	splicing	c.721-1G>A
1	TMEM176B	Exon6	stopgain SNV	c.688C>T

1	TMEM177	Exon2	frameshift insertion	c.450_451insC
9	TMEM177	Exon2	stopgain SNV	c.853C>T
1	TMEM179B	Exon5	stopgain SNV	c.510G>A
1	TMEM179B	Exon5	frameshift insertion	c.580_581insGCCA
1	TMEM179B	Exon5	frameshift insertion	c.582_583insA
1	TMEM180	Exon5	frameshift insertion	c.650_651insC
1	TMEM180	Exon9	frameshift insertion	c.1265dupG
1	TMEM180	Exon10	frameshift deletion	c.1366delG
1	TMEM18	Exon4	splicing	c.179-1G>A
1	TMEM194A	Exon7	frameshift insertion	c.857dupT
2	TMEM198	Exon4	frameshift deletion	c.888delT
2	TMEM200A	Exon2	frameshift deletion	c.419delT
3	TMEM206	Exon5	frameshift deletion	c.631delC
2	TMEM209	Exon8	splicing	c.951+2T>C
1	TMEM214	Exon9	frameshift deletion	c.1051delG
1	TMEM214	Exon13	stopgain SNV	c.1508C>G
1	TMEM27	Exon3	stopgain SNV	c.139G>T
1	TMEM31	Exon3	frameshift deletion	c.234_249delTGAGT GGATTTTCAAC
1	TMEM38A	Exon4	frameshift deletion	c.541_542delCT
1	TMEM44	Exon9	splicing	c.913-2_913-2delA
2	TMEM48	Exon15	frameshift deletion	c.1695delA
1	TMEM48	Exon12	frameshift deletion	c.1431_1432delAA
2	TMEM54	Exon6	frameshift deletion	c.636_649delGAGC TGCACCAGCT
1	TMEM59	Exon6	splicing	c.544-1G>A
1	TMEM59	Exon2	stopgain SNV	c.283G>T
1	TMEM60	Exon2	frameshift deletion	c.231delA
1	TMEM61	Exon2	stopgain SNV	c.292C>T
1	TMEM62	Exon2	frameshift insertion	c.234dupA
1	TMEM62	Exon14	frameshift deletion	c.1680delC
1	TMEM63B	Exon24	frameshift deletion	c.2364delT
1	TMEM63C	Exon3	frameshift insertion	c.3_4insGG
1	TMEM71	Exon10	frameshift deletion	c.821delT

1	TMEM72	Exon4	stopgain SNV	c.309C>A
1	TMEM79	Exon4	frameshift insertion	c.1024_1025dupTA
2	TMEM81	Exon1	stopgain SNV	c.223C>T
1	TMEM82	Exon5	frameshift insertion	c.920_921insGA
1	TMEM82	Exon5	frameshift insertion	c.924dupG
1	TMEM85	Exon3	frameshift insertion	c.340dupA
1	TMEM87A	Exon18	splicing	c.1478-2A>G
1	TMEM87B	Exon12	frameshift deletion	c.1114_1115delAG
1	TMEM8C	Exon3	frameshift insertion	c.306_307insT
2	TMEM97	Exon3	frameshift deletion	c.528delA
1	TMEM97	Exon3	stoploss SNV	c.529T>C
1	TMEM99	Exon3	frameshift deletion	c.752_755delTGTT
2	TMEM9	Exon6	frameshift deletion	c.419delC
3	TMEM9	Exon6	frameshift deletion	c.414_415delGG
1	TMIE	Exon2	splicing	c.211+1G>C
1	TMLHE	Exon3	stopgain SNV	c.229C>T
1	TMLHE	Exon2	stopgain SNV	c.6G>A
1	TMOD2	Exon8	frameshift deletion	c.880delG
2	TMOD3	Exon4	stopgain SNV	c.356T>G
1	TMOD3	Exon7	splicing	c.735+1G>C
1	TMPRSS11A	Exon2	frameshift insertion	c.119_120dupAC
1	TMPRSS11B	Exon10	splicing	c.1089+1G>T
1	TMPRSS11B	Exon9	stopgain SNV	c.980delT
1	TMPRSS11B	Exon5	stopgain SNV	c.326C>G
1	TMPRSS11D	Exon9	stopgain SNV	c.1029T>A
1	TMPRSS12	Exon1	stopgain SNV	c.59C>G
4	TMPRSS13	Exon11	frameshift deletion	c.1485delC
2	TMPRSS13	Exon5	frameshift deletion	c.714delG
2	TMPRSS15	Exon18	stopgain SNV	c.2135C>G
1	TMPRSS15	Exon13	splicing	c.1428+2T>G
1	TMPRSS3	Exon4	frameshift deletion	c.208delC
1	TMPRSS4	Exon6	stopgain SNV	c.463C>T

1	TMPRSS6	Exon18	frameshift insertion	c.2346dupC
3	TMPRSS7	Exon5	splicing	c.353-1G>A
2	TMPRSS7	Exon9	stopgain SNV	c.970C>T
1	TMPRSS9	Exon2	frameshift deletion	c.187delC
2	TMTC1	Exon18	frameshift deletion	c.2289delA
1	TNC	Exon11	splicing	c.3214+2T>A
1	TNFAIP3	Exon7	stopgain SNV	c.1081G>T
1	TNFAIP6	Exon6	stoploss SNV	c.833A>T
1	TNFAIP8L3	Exon1	stopgain SNV	c.121C>T
1	TNF	Exon4	frameshift deletion	c.620delG
2	TNFRSF10A	Exon10	stoploss SNV	c.1406G>T
2	TNFRSF10B	Exon7	splicing	c.661+1G>A
3	TNFRSF10C	Exon3	frameshift deletion	c.271delT
1	TNFRSF10D	Exon7	stopgain SNV	c.799C>T
1	TNFRSF11B	Exon2	stopgain SNV	c.276delC
2	TNFRSF13B	Exon3	frameshift insertion	c.204dupA
1	TNFRSF1A	Exon7	frameshift deletion	c.735_736delCA
1	TNFRSF25	Exon4	splicing	c.161-1G>A
1	TNFRSF8	Exon5	frameshift insertion	c.474_475insC
4	TNFSF15	Exon4	frameshift deletion	c.362delA
2	TNFSF18	Exon3	frameshift deletion	c.567_568delCA
3	TNFSF18	Exon1	stopgain SNV	c.30T>A
1	TNIP3	Exon12	splicing	c.967-1G>A
1	TNK1	Exon4	frameshift insertion	c.317dupG
16	TNK1	Exon10	splicing	c.1413-2A>G
1	TNK1	Exon11	stopgain SNV	c.1663G>T
1	TNKS	Exon3	splicing	c.899-2A>T
1	TNKS	Exon3	stopgain SNV	c.913G>T
1	TNNC2	Exon2	frameshift insertion	c.21_22insA
1	TNNI2	Exon2	stoploss SNV	c.12A>C
5	TNNT2	Exon5	splicing	c.53-10_53-6delTTCTG
1	TNRC18	Exon27	frameshift insertion	c.8235_8236insG
1	TNRC6A	Exon17	splicing	c.4330-1G>C
1	TNRC6C	Exon4	frameshift	c.1718delA

			deletion	
1	TNS1	Exon26	stopgain SNV	c.4480C>T
8	TNS4	Exon8	splicing	c.1502-2A>T
1	TOB1	Exon3	frameshift insertion	c.108_109insG
1	TOE1	Exon7	frameshift insertion	c.759_760insT
1	TOM1L1	Exon4	frameshift deletion	c.369delT
1	TOM1L1	Exon10	frameshift deletion	c.975delG
1	TOM1	Exon6	frameshift insertion	c.470_471insG
1	TOM1	Exon6	frameshift insertion	c.472_473insTC
1	TOM1	Exon8	frameshift deletion	c.751delC
14	TOM1	Exon8	frameshift deletion	c.758delT
1	TONSL	Exon15	frameshift insertion	c.1804dupC
1	TOP2A	Exon11	stopgain SNV	c.1318A>T
2	TOP2A	Exon7	frameshift deletion	c.652delA
1	TOP2A	Exon7	frameshift deletion	c.651delC
5	TOP2A	Exon7	frameshift insertion	c.647dupG
1	TOP2A	Exon7	frameshift deletion	c.609delG
2	TOP2A	Exon5	frameshift insertion	c.450_454dupCTATG
1	TOP2B	Exon24	splicing	c.2848-2dupA
1	TOP3B	Exon13	frameshift deletion	c.1501delA
1	TOPORS	Exon3	frameshift deletion	c.1623_1624delGG
1	TOR1AIP1	Exon1	frameshift deletion	c.170delT
1	TOR1AIP1	Exon9	splicing	c.964+1G>A
1	TOR1AIP1	Exon10	frameshift deletion	c.1638delC
1	TOR1AIP2	Exon7	frameshift insertion	c.877_878insT
1	TOR3A	Exon4	frameshift deletion	c.691_692delCT
1	TP53AIP1	Exon2	stopgain SNV	c.95C>A
5	TP53AIP1	Exon2	frameshift insertion	c.63dupG
1	TP53BP1	Exon18	frameshift deletion	c.3707delT
1	TP63	Exon2	splicing	c.63-1G>T
1	TPCN1	Exon25	frameshift deletion	c.2036delT
1	TPCN2	Exon4	frameshift deletion	c.338delA

1	TPD52L3	Exon1	frameshift deletion	c.46delC
1	TPD52L3	Exon1	frameshift insertion	c.279_280insT
3	TPH2	Exon11	frameshift deletion	c.1311delG
1	TPP1	Exon7	splicing	c.509-1G>C
1	TPPP2	Exon2	frameshift deletion	c.62delG
4	TPPP2	Exon4	stopgain SNV	c.495C>G
1	TPRG1L	Exon4	stopgain SNV	c.490C>T
10	TPRG1	Exon5	splicing	c.633+2T>A
1	TPR	Exon50	frameshift deletion	c.7035_7036delAG
1	TPTE2	Exon17	splicing	c.890-2A>C
1	TPTE2	Exon9	stopgain SNV	c.382C>T
1	TPTE	Exon23	splicing	c.1407-1G>T
1	TPTE	Exon17	stopgain SNV	c.1003C>T
2	TPTE	Exon10	stopgain SNV	c.478C>T
1	TPTE	Exon9	stopgain SNV	c.423dupT
5	TPTE	Exon7	splicing	c.119+1G>A
1	TRAF5	Exon8	frameshift deletion	c.786delA
1	TRAFD1	Exon5	stopgain SNV	c.547C>T
4	TRAK1	Exon12	frameshift deletion	c.1242delG
1	TRAK2	Exon16	stopgain SNV	c.2182C>T
1	TRAK2	Exon16	frameshift deletion	c.2161delA
1	TRANK1	Exon21	frameshift deletion	c.8175delT
1	TRANK1	Exon21	frameshift deletion	c.8173delT
1	TRANK1	Exon21	frameshift deletion	c.8050delC
2	TRANK1	Exon14	frameshift insertion	c.4691_4692insAC
1	TRAPPC10	Exon22	frameshift insertion	c.3400dupT
1	TRAPPC8	Exon8	splicing	c.1122+2T>A
1	TRAPPC9	Exon4	frameshift deletion	c.1073delG
1	TREH	Exon4	splicing	c.335+1G>T
1	TREML1	Exon2	stopgain SNV	c.376G>T
4	TREML4	Exon2	frameshift deletion	c.217delT
1	TREX1	Exon2	frameshift deletion	c.416delC
1	TRIM11	Exon3	frameshift deletion	c.591delG

1	TRIM13	Exon2	frameshift deletion	c.16delG
1	TRIM16	Exon4	stopgain SNV	c.143C>A
1	TRIM17	Exon4	frameshift insertion	c.689dupA
2	TRIM24	Exon9	stopgain SNV	c.1334C>A
1	TRIM26	Exon3	frameshift insertion	c.313dupC
4	TRIM31	Exon9	stopgain SNV	c.1228G>T
1	TRIM31	Exon9	frameshift deletion	c.1081_1082delCT
1	TRIM31	Exon2	frameshift deletion	c.14_15delAG
1	TRIM33	Exon17	splicing	c.2892+1dupG
2	TRIM34	Exon2	stopgain SNV	c.90T>A
4	TRIM38	Exon4	stopgain SNV	c.490C>T
11	TRIM40	Exon4	splicing	c.602+1G>T
1	TRIM42	Exon1	frameshift insertion	c.4dupG
1	TRIM42	Exon4	frameshift deletion	c.1864_1865delTT
2	TRIM42	Exon4	frameshift deletion	c.1880delC
1	TRIM43	Exon2	stopgain SNV	c.250C>T
1	TRIM45	Exon2	stopgain SNV	c.536delT
1	TRIM48	Exon3	splicing	c.460-1G>A
19	TRIM48	Exon5	stoploss SNV	c.673T>C
1	TRIM52	Exon1	frameshift deletion	c.98delT
1	TRIM54	Exon3	splicing	c.513+1_513+1delG
1	TRIM54	Exon6	stopgain SNV	c.931C>T
1	TRIM55	Exon3	splicing	c.342-1G>A
6	TRIM58	Exon6	stoploss SNV	c.1459T>C
1	TRIM58	Exon6	frameshift insertion	c.1461_1462insG
1	TRIM59	Exon3	frameshift deletion	c.1103_1106delCTCT
8	TRIM59	Exon3	frameshift deletion	c.604delA
1	TRIM5	Exon6	stopgain SNV	c.829C>T
1	TRIM60	Exon3	stopgain SNV	c.691A>T
1	TRIM61	Exon3	frameshift deletion	c.515_516delTG
1	TRIM63	Exon6	splicing	c.831+2T>G
1	TRIM77P	Exon5	frameshift deletion	c.788_789delCC
1	TRIM7	Exon7	stoploss	c.1535G>C

			SNV	
1	TRIM7	Exon7	frameshift deletion	c.1496_1497delCT
1	TRIML1	Exon5	frameshift deletion	c.762_763delCG
11	TRIO	Exon2	stopgain SNV	c.230C>A
3	TRIP11	Exon11	frameshift deletion	c.4508delT
1	TRIP11	Exon3	frameshift deletion	c._del
1	TRIP11	Exon3	frameshift insertion	c.308_309insT
1	TRIP11	Exon3	stopgain SNV	c.304C>T
9	TRIP13	Exon11	stopgain SNV	c.1045C>T
1	TRMT11	Exon7	frameshift deletion	c.542_543delAG
1	TRMT11	Exon11	stopgain SNV	c.1116T>A
3	TRMT2A	Exon12	frameshift insertion	c.1797dupG
2	TRMT5	Exon2	frameshift deletion	c.312_315delAATA
1	TRMT61B	Exon1	stopgain SNV	c.627C>G
1	TRMT61B	Exon1	frameshift deletion	c.545_546delGT
2	TRNAU1AP	Exon5	frameshift deletion	c.410_410del
1	TRNT1	Exon2	stopgain SNV	c.24G>A
1	TRNT1	Exon2	frameshift deletion	c.33_46delAGTGCTGAACCGTA
1	TRNT1	Exon8	frameshift insertion	c.1252dupA
1	TROVE2	Exon2	frameshift insertion	c.451_452insA
1	TRPC1	Exon3	frameshift insertion	c.424dupA
1	TRPC1	Exon11	frameshift deletion	c.1889delG
1	TRPC1	Exon11	stopgain SNV	c.1898T>G
1	TRPC4AP	Exon16	splicing	c.1687-2A>T
3	TRPC6	Exon6	splicing	c.1294-1G>C
1	TRPC6	Exon3	frameshift deletion	c.1125_1128delAAAA
1	TRPM2	Exon20	stopgain SNV	c.3046C>T
1	TRPM2	Exon22	stopgain SNV	c.3406C>T
1	TRPM3	Exon25	frameshift deletion	c.5056delG
7	TRPM3	Exon3	frameshift deletion	c.276delG
2	TRPM4	Exon18	stopgain SNV	c.2740A>T
1	TRPM4	Exon25	splicing	c.3641-2A>T

1	TRPM8	Exon11	stopgain SNV	c.1354C>T
1	TRPV3	Exon9	frameshift deletion	c.1119delG
1	TRPV4	Exon16	frameshift deletion	c.2584delC
1	TRPV5	Exon8	frameshift deletion	c.982delT
1	TRUB2	Exon2	frameshift deletion	c.132delC
1	TSC22D1	Exon2	splicing	c.1663+2C>T
1	TSC2	Exon31	frameshift insertion	c.3757_3758insA
1	TSC2	Exon31	frameshift deletion	c.3764delT
1	TSGA10IP	Exon1	frameshift deletion	c.51_61delCCCGTCGGTGT
1	TSGA10IP	Exon3	stopgain SNV	c.907C>T
1	TSGA13	Exon5	stopgain SNV	c.183C>G
1	TSHR	Exon10	stopgain SNV	c.1637G>A
1	TSHZ1	Exon2	frameshift deletion	c.2460delC
1	TSHZ3	Exon2	frameshift deletion	c.1216delA
1	TSNARE1	Exon4	frameshift deletion	c.571delC
1	TSNAXIP1	Exon9	stopgain SNV	c.880C>T
19	TSPAN10	Exon3	frameshift deletion	c.681_684delTAAC
1	TSPAN33	Exon8	stopgain SNV	c.772C>T
1	TSPAN4	Exon9	stopgain SNV	c.685C>T
1	TSPAN8	Exon9	stoploss SNV	c.712T>C
1	TSPEAR	Exon7	frameshift deletion	c.937delG
1	TSPEAR	Exon7	frameshift deletion	c.928_929delGA
1	TSPEAR	Exon5	frameshift deletion	c.650_653delTGGT
1	TSPYL2	Exon1	frameshift insertion	c.600dupG
1	TSPYL2	Exon1	frameshift deletion	c.610delA
1	TSPYL6	Exon1	frameshift insertion	c.570dupG
1	TSR1	Exon12	splicing	c.1771-1G>A
1	TSSC1	Exon6	stopgain SNV	c.527C>G
1	TSSK1B	Exon1	frameshift insertion	c.1075dupC
1	TSSK1B	Exon1	frameshift insertion	c.608dupG
1	TSSK2	Exon1	stopgain SNV	c.891C>A

1	TSSK3	Exon2	stopgain SNV	c.372C>A
1	TSTD2	Exon9	stopgain SNV	c.1114G>T
1	TSTD2	Exon7	splicing	c.730-1G>A
1	TTBK2	Exon5	stopgain SNV	c.328C>T
1	TTC12	Exon19	stopgain SNV	c.1678C>T
1	TTC13	Exon12	stopgain SNV	c.1444C>T
1	TTC16	Exon4	frameshift deletion	c.355delC
1	TTC16	Exon4	frameshift deletion	c.364_365delTA
7	TTC18	Exon4	splicing	c.64-2A>G
1	TTC21A	Exon3	frameshift deletion	c.193delA
1	TTC21A	Exon4	stopgain SNV	c.271C>T
1	TTC21A	Exon29	stopgain SNV	c.3925G>T
1	TTC22	Exon5	stopgain SNV	c.880C>T
2	TTC23L	Exon2	frameshift deletion	c.65_68delATAT
8	TTC24	Exon5	frameshift deletion	c.1144delC
1	TTC26	Exon18	stopgain SNV	c.1614C>G
1	TTC29	Exon11	frameshift deletion	c.1138delG
1	TTC33	Exon5	stopgain SNV	c.677C>G
1	TTC37	Exon18	frameshift deletion	c.1670delA
1	TTC37	Exon6	stopgain SNV	c.321T>G
1	TTC7A	Exon8	frameshift deletion	c.1014_1015delCC
1	TTC9B	Exon3	frameshift insertion	c.684dupT
10	TTC9C	Exon2	stopgain SNV	c.270C>G
1	TTF2	Exon5	frameshift insertion	c.616_617insT
1	TTF2	Exon5	frameshift insertion	c.620_621insGC
1	TTF2	Exon5	frameshift deletion	c.896delC
1	TTK	Exon17	splicing	c.1925-2_1925-2delA
1	TTK	Exon22	stoploss SNV	c.2574A>T
1	TTLL11	Exon4	frameshift deletion	c.1342delG
1	TTLL12	Exon14	frameshift deletion	c.1908delT
5	TTLL3	Exon8	frameshift deletion	c.1207delA
1	TTLL3	Exon8	frameshift	c.1227delC

			deletion	
1	TTLL3	Exon13	frameshift deletion	c.2448_2449delGG
1	TTLL3	Exon13	stopgain SNV	c.2450delC
1	TTLL3	Exon13	frameshift deletion	c.2452_2453delAG
1	TTLL4	Exon10	frameshift deletion	c.2225delA
1	TTLL5	Exon10	frameshift deletion	c.789_793delGTTCA
1	TTLL5	Exon24	splicing	c.2388-1G>T
3	TTLL6	Exon2	frameshift deletion	c.154_170delTGCCC GACTTTGGAAAAG
12	TTN	Exon186	stopgain SNV	c.78586C>T
10	TTN	Exon186	stopgain SNV	c.75637G>T
1	TTN	Exon184	stopgain SNV	c.72863T>A
1	TTN	Exon171	frameshift deletion	c.68146delG
1	TTN	Exon170	frameshift deletion	c.67800delT
1	TTN	Exon170	frameshift deletion	c.67796delG
1	TTN	Exon167	stoploss SNV	c.65586G>C
1	TTN	Exon163	stopgain SNV	c.62695C>T
1	TTN	Exon159	stopgain SNV	c.61263G>A
1	TTN	Exon154	stoploss SNV	c.56581T>C
3	TTN	Exon154	stopgain SNV	c.53439C>A
2	TTN	Exon154	stopgain SNV	c.50009G>A
1	TTN	Exon154	stopgain SNV	c.44884C>T
1	TTN	Exon154	stopgain SNV	c.44744G>A
1	TTN	Exon148	stopgain SNV	c.41012T>A
1	TTN	Exon144	stopgain SNV	c.39295A>T
3	TTN	Exon141	stopgain SNV	c.38547C>A
18	TTN	Exon139	stopgain SNV	c.37951C>T
1	TTN	Exon132	stoploss SNV	c.35560T>C
2	TTN	Exon101	stopgain SNV	c.24704T>A
1	TTN	Exon72	splicing	c.17621-1G>A
1	TTN	Exon42	stopgain SNV	c.9934G>T
1	TTN	Exon42	stopgain SNV	c.9877G>T
1	TTN	Exon35	frameshift	c.8471_8472insG

			insertion	
1	TTN	Exon35	frameshift deletion	c.8466delC
1	TTN	Exon5	splicing	c.583+2T>C
1	TTYH3	Exon8	frameshift deletion	c.909_910delCC
1	TUBA3D	Exon5	frameshift deletion	c.1150_1151delAT
1	TUBA3D	Exon5	frameshift insertion	c.1305_1306insCAGT
1	TUBA3E	Exon4	frameshift deletion	c.805delC
3	TUBB1	Exon2	stopgain SNV	c.125T>A
1	TUBB2B	Exon4	frameshift deletion	c.957_958delCC
1	TUBG1	Exon1	stopgain SNV	c.46C>T
1	TUBGCP2	Exon7	frameshift deletion	c.877delG
4	TUB	Exon4	stopgain SNV	c.415C>T
1	TULP2	Exon9	frameshift deletion	c.1033delG
6	TULP2	Exon4	stopgain SNV	c.200T>G
1	TULP3	Exon9	splicing	c.1023+1G>A
2	TULP3	Exon11	splicing	c.1309+1G>C
1	TULP4	Exon1	stopgain SNV	c.154C>T
1	TUSC3	Exon8	frameshift insertion	c.865dupG
1	TWISTNB	Exon4	frameshift deletion	c.923delA
4	TWISTNB	Exon2	stopgain SNV	c.388A>T
1	TXLNG	Exon8	frameshift deletion	c.1121_1122delAA
2	TXNDC11	Exon12	stopgain SNV	c.2518C>T
1	TXNDC11	Exon8	stopgain SNV	c.1772G>A
4	TXNDC16	Exon8	splicing	c.393-1G>A
3	TXNRD3NB	Exon3	frameshift deletion	c.167_168delAG
1	TYK2	Exon24	frameshift deletion	c.3412delG
1	TYK2	Exon23	frameshift insertion	c.3315dupC
2	TYK2	Exon20	frameshift insertion	c.2716_2717insT
1	TYROBP	Exon5	splicing	c.230-1G>A
1	TYROBP	Exon3	frameshift deletion	c.126delG
1	TYRP1	Exon4	stopgain SNV	c.853C>T
1	TYRP1	Exon8	stopgain SNV	c.1557T>G
1	TYW1B	Exon11	stopgain	c.1219C>T

			SNV	
1	TYW3	Exon1	frameshift deletion	c.170delA
1	U2AF1L4	Exon5	frameshift deletion	c.353delC
1	UBA3	Exon11	frameshift deletion	c.817_818delGA
1	UBA7	Exon13	frameshift deletion	c.1505delG
1	UBA7	Exon10	stopgain SNV	c.1189G>T
1	UBAP2	Exon13	frameshift insertion	c.1195dupA
13	UBAP2	Exon6	frameshift insertion	c.481dupG
1	UBAP2	Exon6	frameshift deletion	c.474_475delTC
7	UBE2D1	Exon5	splicing	c.199-1G>C
1	UBE2E2	Exon2	stopgain SNV	c.19A>T
1	UBE2U	Exon2	stopgain SNV	c.108G>A
1	UBE3C	Exon9	frameshift insertion	c.1131_1132insGT
2	UBE4B	Exon7	frameshift deletion	c.1154delG
2	UBL4B	Exon1	stopgain SNV	c.180delC
1	UBN1	Exon15	frameshift deletion	c.2249delC
1	UBN1	Exon15	frameshift insertion	c.2764_2765insA
3	UBQLNL	Exon1	stopgain SNV	c.913C>T
1	UBR2	Exon1	frameshift insertion	c.28_29insCC
1	UBR3	Exon18	stopgain SNV	c.2489T>G
7	UBR4	Exon69	frameshift deletion	c.10168delC
1	UBTF	Exon13	stopgain SNV	c.1356_1357insT
1	UBXN10	Exon2	stopgain SNV	c.81G>A
9	UBXN11	Exon15	frameshift deletion	c.1363_1364delGG
11	UBXN11	Exon15	frameshift deletion	c.1358_1361delGTCC
2	UBXN11	Exon13	frameshift deletion	c.1051_1052delAG
1	UBXN7	Exon7	stopgain SNV	c.681T>G
1	UBXN8	Exon1	frameshift deletion	c.82delG
1	UBXN8	Exon7	stopgain SNV	c.589C>T
1	UCK1	Exon3	frameshift insertion	c.290_291dupTG
2	UCP3	Exon7	splicing	c.824+1G>A
1	UFSP1	Exon1	stoploss	c.429A>C

			SNV	
1	UGGT1	Exon31	frameshift deletion	c.3458delA
1	UGGT2	Exon30	frameshift deletion	c.3492_3493delTC
1	UGGT2	Exon18	frameshift insertion	c.2041dupC
1	UGGT2	Exon6	splicing	c.486-2A>G
1	UGT1A10	Exon1	stopgain SNV	c.624G>A
1	UGT1A1	Exon1	frameshift insertion	c.377dupG
1	UGT1A3	Exon1	frameshift deletion	c.72delC
1	UGT1A3	Exon1	frameshift insertion	c.518dupT
1	UGT1A5	Exon1	frameshift deletion	c.695delC
1	UGT1A7	Exon1	splicing	c.855+1G>A
1	UGT1A9	Exon1	stopgain SNV	c.726T>G
1	UGT2B17	Exon1	frameshift insertion	c.311dupA
1	UGT2B28	Exon3	frameshift insertion	c.897dupT
1	UGT2B28	Exon3	frameshift deletion	c.905_906delAA
1	UGT2B28	Exon3	frameshift deletion	c.908delG
1	UGT2B4	Exon1	frameshift deletion	c.447delT
1	UGT2B7	Exon1	stopgain SNV	c.108G>A
1	UGT8	Exon2	frameshift deletion	c.73delA
1	UHMK1	Exon4	frameshift insertion	c.585_586insCTGA
1	UHRF1BP1	Exon16	frameshift insertion	c.3459_3460insAA
1	UHRF1BP1	Exon20	stopgain SNV	c.4141C>T
1	UHRF1	Exon5	stopgain SNV	c.613C>T
3	UHRF1	Exon15	stopgain SNV	c.2027C>A
2	ULBP3	Exon1	stopgain SNV	c.54C>G
1	ULK1	Exon26	frameshift deletion	c.2942delT
1	ULK4	Exon25	stopgain SNV	c.2584C>T
1	ULK4	Exon18	frameshift deletion	c.1681_1684delATTA
1	UMODL1	Exon2	splicing	c.103+2T>C
1	UMODL1	Exon3	stopgain SNV	c.121C>T
1	UMOD	Exon4	stopgain SNV	c.955C>T
1	UMPS	Exon1	frameshift deletion	c.25_29delGGGCC

14	UNC13A	Exon35	splicing	c.4203+1C>T
1	UNC13B	Exon18	frameshift deletion	c.2157_2158delAG
2	UNC13C	Exon1	stopgain SNV	c.1429G>T
5	UNC13C	Exon3	frameshift insertion	c.3024_3025dupCA
2	UNC13D	Exon19	splicing	c.1596+2T>G
1	UNC13D	Exon18	frameshift insertion	c.1564_1565insG
1	UNC45A	Exon16	splicing	c.1693-1G>T
1	UNC5CL	Exon9	splicing	c.1334+1G>A
1	UNC80	Exon4	stopgain SNV	c.520C>T
1	UNC80	Exon30	stopgain SNV	c.4773G>A
2	UNC80	Exon59	frameshift deletion	c.9031delC
8	UNC93A	Exon4	splicing	c.625+1G>C
3	UNC93A	Exon5	stopgain SNV	c.676C>T
1	UNC93A	Exon6	splicing	c.976+1G>A
1	UPB1	Exon1	frameshift deletion	c.47delA
1	UPB1	Exon7	splicing	c.873+2dupT
3	UPB1	Exon9	splicing	c.917-1G>A
1	UPF1	Exon14	frameshift insertion	c.1964dupA
1	UPK2	Exon2	splicing	c.208+1G>A
1	UPK3A	Exon3	stopgain SNV	c.260C>A
1	UPK3A	Exon4	stopgain SNV	c.545G>A
1	UPK3A	Exon4	splicing	c.571+1G>A
4	UPP2	Exon3	frameshift insertion	c.148dupG
1	UQCRB	Exon2	stopgain SNV	c.52C>T
1	URB1	Exon26	frameshift deletion	c.4388delG
1	URB2	Exon4	frameshift deletion	c.1002delC
14	USH1C	Exon16	stopgain SNV	c.1299T>G
1	USH1C	Exon3	frameshift insertion	c.238dupC
2	USH2A	Exon48	splicing	c.9371+2_9371+2delT
15	USH2A	Exon40	stopgain SNV	c.7501C>T
3	USH2A	Exon27	stopgain SNV	c.5533G>T
1	USH2A	Exon13	frameshift deletion	c.2299delG
1	USHBP1	Exon11	frameshift insertion	c.1721_1722insA
2	USP17L2	Exon1	frameshift deletion	c.1251delA

1	USP19	Exon12	frameshift deletion	c.1707delA
1	USP19	Exon2	frameshift deletion	c.63delT
1	USP20	Exon24	frameshift deletion	c.2572_2573delCC
1	USP21	Exon3	frameshift deletion	c.201delG
1	USP25	Exon20	splicing	c.2517-1G>T
1	USP27X	Exon1	frameshift deletion	c.554delT
3	USP29	Exon4	stopgain SNV	c.871G>T
1	USP32	Exon20	frameshift deletion	c.2249delA
1	USP32	Exon5	stopgain SNV	c.433A>T
1	USP34	Exon16	frameshift insertion	c.2474_2475insA
1	USP34	Exon16	splicing	c.2285+-1_2285+2dupGGGT
1	USP35	Exon2	frameshift deletion	c.53delA
1	USP35	Exon4	stopgain SNV	c.905delT
1	USP38	Exon1	frameshift deletion	c.366delT
1	USP40	Exon29	stoploss SNV	c.3304T>A
1	USP40	Exon28	frameshift insertion	c.3236dupA
1	USP40	Exon11	frameshift deletion	c._del
1	USP40	Exon8	stopgain SNV	c.888G>A
1	USP42	Exon15	frameshift insertion	c.2329dupC
1	USP42	Exon16	frameshift deletion	c.3891_3894delTTAC
1	USP45	Exon10	frameshift deletion	c.1008delA
11	USP45	Exon9	splicing	c.845+2T>C
1	USP45	Exon2	stopgain SNV	c.7delG
1	USP45	Exon17	stopgain SNV	c.2190C>A
1	USP45	Exon15	stopgain SNV	c.1990G>T
1	USP4	Exon1	stopgain SNV	c.101G>A
1	USP50	Exon6	frameshift insertion	c.915dupA
1	USP54	Exon20	stopgain SNV	c.4183C>T
1	USP6	Exon2	stopgain SNV	c.37C>T
1	USP6	Exon14	splicing	c.1498+2T>G
1	USP6	Exon19	frameshift deletion	c.2079_2080delAT
1	USP6	Exon28	stopgain SNV	c.3565A>T

1	USP9X	Exon42	stopgain SNV	c.7144A>T
1	UTP14C	Exon2	frameshift deletion	c.1829_1830delAG
3	UTP14C	Exon2	stopgain SNV	c.2214C>G
2	UTP20	Exon23	splicing	c.2739-2A>T
1	UTRN	Exon1	splicing	c.79+1G>A
1	UTRN	Exon46	frameshift deletion	c.6636delG
1	UTRN	Exon46	stopgain SNV	c.6638delC
1	UTRN	Exon46	frameshift deletion	c.6641delA
2	UTRN	Exon53	frameshift deletion	c.7877delT
3	UTRN	Exon62	frameshift deletion	c.9075delA
1	UTS2D	Exon5	stopgain SNV	c.82G>T
1	UTS2D	Exon5	frameshift deletion	c.62delG
1	VAC14	Exon19	stopgain SNV	c.2290G>T
2	VAC14	Exon4	stopgain SNV	c.451A>T
1	VARS2	Exon12	frameshift insertion	c.796dupG
1	VARS2	Exon19	frameshift deletion	c.1498delC
1	VAV3	Exon1	stopgain SNV	c.11G>A
1	VAX1	Exon4	frameshift deletion	c.479_482delAAAA
1	VAX2	Exon2	stopgain SNV	c.253A>T
2	VCL	Exon21	stoploss SNV	c.3200A>G
1	VCIPI1	Exon1	frameshift deletion	c.357delG
1	VEGFB	Exon6	frameshift insertion	c.487_488insA
1	VENTX	Exon3	stopgain SNV	c.541C>T
1	VEPH1	Exon2	stopgain SNV	c.46C>T
6	VGLL1	Exon3	stopgain SNV	c.425T>A
1	VGLL3	Exon2	frameshift deletion	c.154delC
9	VIL1	Exon14	splicing	c.1501-1G>A
1	VIL1	Exon16	frameshift deletion	c.1933delG
1	VIL1	Exon16	frameshift insertion	c.1954_1955insCT
1	VILL	Exon18	frameshift deletion	c.2253delA
1	VILL	Exon18	stopgain SNV	c.2327C>A
4	VIM	Exon10	stoploss	c.1401A>C

			SNV	
1	VIP	Exon3	stopgain SNV	c.133G>T
1	VIP	Exon6	frameshift deletion	c.470delG
13	VIT	Exon8	stopgain SNV	c.702C>G
1	VIT	Exon14	frameshift insertion	c.1352_1353insT
10	VN1R4	Exon1	frameshift deletion	c.349delG
4	VNN1	Exon7	stoploss SNV	c.1540T>C
1	VNN1	Exon3	stopgain SNV	c.427A>T
1	VPRBP	Exon15	splicing	c.3077+1G>C
1	VPREB1	Exon1	splicing	c.46+1G>A
1	VPREB1	Exon2	stoploss SNV	c.436delT
1	VPREB3	Exon2	stoploss SNV	c.371A>T
5	VPS11	Exon12	stopgain SNV	c.1925C>G
1	VPS13A	Exon39	stopgain SNV	c.4684G>T
1	VPS13B	Exon24	frameshift insertion	c.3491_3492dupAT
1	VPS13B	Exon25	frameshift deletion	c.3782delC
1	VPS13B	Exon32	stopgain SNV	c.5011C>T
1	VPS13C	Exon64	frameshift insertion	c.8732dupC
1	VPS13C	Exon61	frameshift deletion	c.8343delT
1	VPS13C	Exon20	stopgain SNV	c.1765C>T
1	VPS13C	Exon8	frameshift deletion	c._del
1	VPS16	Exon12	frameshift deletion	c.1089_1090delTT
1	VPS35	Exon14	frameshift deletion	c.1707delT
1	VPS35	Exon14	stopgain SNV	c.1654A>T
1	VPS39	Exon19	frameshift insertion	c.2016dupT
1	VPS4A	Exon10	frameshift insertion	c.1135_1136insT
1	VPS4B	Exon11	splicing	c.1093-1G>T
1	VPS8	Exon31	frameshift deletion	c.2686delC
1	VRK3	Exon7	stopgain SNV	c.655C>T
1	VRTN	Exon2	frameshift insertion	c.630_631insG
1	VRTN	Exon2	frameshift insertion	c.983dupG
11	VSIG10L	Exon10	frameshift insertion	c.2577dupA

1	VSTM1	Exon9	stoploss SNV	c.709T>C
1	VWA3A	Exon8	splicing	c.689+1G>A
2	VWA3A	Exon26	stopgain SNV	c.2621T>A
1	VWA3B	Exon2	frameshift deletion	c.159delA
1	VWA3B	Exon12	stopgain SNV	c.1714C>T
1	VWA3B	Exon19	frameshift deletion	c.2547_2560delGAAGACCTATGGCT
1	VWCE	Exon15	stopgain SNV	c.1807A>T
13	VWDE	Exon19	stopgain SNV	c.3816dupT
1	VWDE	Exon8	stopgain SNV	c.1153C>T
1	VWF	Exon28	frameshift deletion	c.4148delT
1	WASL	Exon11	frameshift deletion	c.1461delA
1	WBSCR28	Exon2	stopgain SNV	c.233G>A
1	WBSCR28	Exon2	stopgain SNV	c.234G>A
5	WDFY3	Exon49	frameshift deletion	c.7873delC
1	WDFY3	Exon28	frameshift deletion	c.4576delC
1	WDFY4	Exon29	stopgain SNV	c.4931T>A
1	WDHD1	Exon26	stopgain SNV	c.3247C>T
1	WDR11	Exon23	frameshift deletion	c.2776_2777delCT
1	WDR16	Exon3	splicing	c.204-1G>C
1	WDR16	Exon5	frameshift deletion	c.443delA
5	WDR17	Exon23	frameshift deletion	c.2932delG
1	WDR17	Exon27	splicing	c.3464+2_3464+5delTGAG
1	WDR18	Exon9	frameshift deletion	c.1120_1126delGACCGCA
7	WDR27	Exon19	frameshift deletion	c.1844delG
9	WDR27	Exon17	splicing	c.1622+1G>T
1	WDR31	Exon8	stopgain SNV	c.613C>T
1	WDR33	Exon4	splicing	c.205-12_205-5delTTTATTTA
1	WDR35	Exon24	stopgain SNV	c.2935C>T
1	WDR35	Exon21	splicing	c.2414+1_2414+1delG
1	WDR35	Exon15	splicing	c.1471-1G>T
1	WDR3	Exon2	frameshift deletion	c.72_75delTAAT
1	WDR3	Exon6	stopgain SNV	c.673G>T
1	WDR3	Exon12	frameshift insertion	c.1346_1347insG

1	WDR49	Exon5	frameshift insertion	c.547dupA
1	WDR5B	Exon1	frameshift deletion	c.490_493delTCTG
5	WDR62	Exon31	stopgain SNV	c.4169T>G
1	WDR63	Exon12	splicing	c.1264-1G>T
1	WDR64	Exon27	frameshift insertion	c.3246dupA
1	WDR65	Exon7	frameshift insertion	c.1238dupT
2	WDR66	Exon2	stopgain SNV	c.331G>T
1	WDR66	Exon14	splicing	c.2307+2T>C
1	WDR67	Exon12	frameshift deletion	c.1646delT
1	WDR67	Exon13	stopgain SNV	c.1830C>G
1	WDR6	Exon2	frameshift deletion	c.2108delA
1	WDR6	Exon2	frameshift insertion	c.2511dupG
7	WDR72	Exon15	stopgain SNV	c.2299A>T
1	WDR72	Exon5	stopgain SNV	c.474G>A
2	WDR78	Exon15	frameshift deletion	c.2294delC
1	WDR78	Exon13	stopgain SNV	c.1975C>T
1	WDR78	Exon12	frameshift deletion	c.1750delC
1	WDR83	Exon7	frameshift deletion	c.396delT
1	WDR83	Exon7	frameshift deletion	c.403delT
1	WDR83	Exon10	frameshift insertion	c.738dupT
1	WDR85	Exon9	frameshift insertion	c.1323_1324insA
1	WDR85	Exon9	frameshift insertion	c.1321_1322insT
1	WDR85	Exon9	frameshift deletion	c.1194delA
1	WDR87	Exon6	stopgain SNV	c.7329T>G
1	WDR89	Exon3	stopgain SNV	c.923C>G
1	WDR91	Exon8	frameshift insertion	c.1090dupG
1	WDR91	Exon1	stopgain SNV	c.28G>T
1	WDR93	Exon2	splicing	c.303+1G>A
1	WDR93	Exon7	frameshift deletion	c.794delT
3	WDR96	Exon23	stopgain SNV	c.2990T>A
1	WDT1	Exon9	frameshift insertion	c.868dupG
1	WDFC8	Exon5	frameshift	c.540delA

			deletion	
1	WFDC8	Exon5	frameshift deletion	c.535_538delGACA
1	WHSC1	Exon22	frameshift insertion	c.4028dupC
1	WIFI1	Exon9	stopgain SNV	c.834C>A
1	WNK1	Exon3	frameshift deletion	c.974_975delGA
1	WNK1	Exon19	frameshift deletion	c.5612_5613delCC
2	WNK1	Exon19	frameshift deletion	c.5615delC
3	WNK3	Exon18	stopgain SNV	c.3862A>T
1	WNK4	Exon8	frameshift deletion	c.1800delT
1	WNK4	Exon16	frameshift insertion	c.3193dupG
1	WNK4	Exon16	frameshift insertion	c.3321_3322insT
1	WNK4	Exon16	frameshift deletion	c.3421delC
1	WNK4	Exon16	frameshift deletion	c.3426_3427delGG
1	WNT10A	Exon2	stopgain SNV	c.321C>A
1	WNT11	Exon4	stopgain SNV	c.673A>T
1	WNT16	Exon3	frameshift insertion	c.470dupG
1	WRAP53	Exon3	frameshift insertion	c.454dupC
1	WRAP53	Exon3	frameshift insertion	c.455_456insC
1	WRAP53	Exon8	frameshift deletion	c.1049delG
7	WRAP53	Exon11	frameshift insertion	c.1564dupG
1	WRAP53	Exon11	frameshift deletion	c.1565delC
1	WRAP73	Exon2	stopgain SNV	c.87C>A
2	WRN	Exon35	stopgain SNV	c.4216C>T
1	WSB2	Exon5	frameshift deletion	c.646delG
1	WT1	Exon7	splicing	c.1198+1_1198+1delG
2	WTH3DI	Exon1	frameshift deletion	c.597_600delAACA
1	WWC1	Exon14	splicing	c.2087+2T>C
1	WWC3	Exon7	frameshift deletion	c.618delG
3	WWC3	Exon7	frameshift insertion	c.619_620insA
2	XAF1	Exon3	stopgain SNV	c.343G>T
1	XDH	Exon32	splicing	c.3352-2A>G
1	XDH	Exon17	splicing	c.1686+1G>C

1	XG	Exon1	stopgain SNV	c.12G>A
1	XIRP1	Exon2	stopgain SNV	c.1708C>T
1	XK	Exon3	frameshift deletion	c.1201delC
3	XKR6	Exon3	stopgain SNV	c.1062C>G
1	XKR8	Exon3	stopgain SNV	c.910delG
1	XKR9	Exon5	stopgain SNV	c.547C>T
13	XKRX	Exon4	splicing	c.605-11_605-6delGTTTT
1	XPC	Exon16	frameshift deletion	c.2551delG
1	XPC	Exon16	frameshift insertion	c.2545_2546insT
1	XPC	Exon16	frameshift deletion	c.2538delC
4	XPC	Exon9	frameshift deletion	c.1309delC
1	XPC	Exon8	splicing	c.789+2_789+2delT
1	XPNPEP3	Exon1	frameshift deletion	c.41delT
1	XPNPEP3	Exon2	frameshift deletion	c.71_74delTGTT
1	XPO1	Exon18	frameshift deletion	c.2141delA
1	XPOT	Exon11	frameshift deletion	c.1150delA
1	XPOT	Exon12	frameshift insertion	c.1207_1208insAGGT
1	XRRA1	Exon15	frameshift insertion	c.1435dupT
1	XRRA1	Exon13	stopgain SNV	c.1237C>T
1	XYLT2	Exon4	splicing	c.1007+2T>G
2	YARS2	Exon6	splicing	c.1275-2dupA
1	YARS2	Exon1	frameshift deletion	c.403delG
1	YARS2	Exon1	frameshift deletion	c.180delG
1	YBEY	Exon4	frameshift insertion	c.396_397insCG
1	YBX2	Exon5	frameshift deletion	c.530_531delGA
3	YEATS2	Exon13	frameshift deletion	c.1594_1595delCA
1	YEATS2	Exon26	frameshift insertion	c.3576_3577insT
5	YES1	Exon12	frameshift deletion	c.1577_1578delTG
1	YIF1B	Exon5	frameshift deletion	c.518_519delGG
2	YIPF1	Exon8	splicing	c.481+2T>C
1	YIPF1	Exon6	frameshift deletion	c.304_305delTT
1	YIPF7	Exon3	stopgain SNV	c.274C>T

1	YSK4	Exon10	splicing	c.3920+1G>C
2	YTHDF1	Exon4	stopgain SNV	c.796A>T
1	YTHDF1	Exon4	frameshift insertion	c.464dupC
1	YTHDF2	Exon5	frameshift insertion	c.710dupC
1	YTHDF3	Exon5	frameshift deletion	c.1749_1752delAAAC
1	YWHAB	Exon2	frameshift insertion	c.65_66dupAT
1	YY1AP1	Exon11	frameshift deletion	c.2305_2306delCT
1	ZACN	Exon7	frameshift deletion	c.721delG
5	ZAN	Exon11	splicing	c.1249+1G>A
1	ZAN	Exon26	frameshift deletion	c.4918delA
9	ZAN	Exon31	stopgain SNV	c.5649G>A
1	ZAN	Exon35	frameshift insertion	c.6435_6436insA
1	ZAN	Exon36	stopgain SNV	c.6693G>A
1	ZAN	Exon38	frameshift deletion	c.7051delG
4	ZAN	Exon38	frameshift insertion	c.7062_7063insC
13	ZAN	Exon41	stopgain SNV	c.7618C>T
1	ZBBX	Exon7	splicing	c.273+1G>C
1	ZBBX	Exon6	frameshift deletion	c.263delA
1	ZBP1	Exon8	stopgain SNV	c.1132C>T
1	ZBP1	Exon7	stopgain SNV	c.974C>A
1	ZBP1	Exon7	frameshift insertion	c.929dupG
1	ZBP1	Exon6	stopgain SNV	c.716C>A
2	ZBTB2	Exon3	frameshift deletion	c.1169delT
1	ZBTB37	Exon3	frameshift deletion	c.148delC
1	ZBTB39	Exon2	frameshift deletion	c.1227_1228delCT
1	ZBTB41	Exon2	stopgain SNV	c.1278T>A
1	ZBTB45	Exon2	frameshift deletion	c.1119delG
1	ZBTB45	Exon2	frameshift deletion	c.1103delC
1	ZBTB45	Exon2	frameshift insertion	c.637_638insTCCCC
1	ZBTB45	Exon2	frameshift deletion	c.619_620delGG
3	ZBTB4	Exon3	frameshift insertion	c.11dupC
1	ZBTB7C	Exon2	frameshift	c.692_693insG

			insertion	
1	ZBTB9	Exon2	stopgain SNV	c.1342C>T
1	ZC3H10	Exon3	frameshift insertion	c.163dupC
1	ZC3H11A	Exon20	stopgain SNV	c.2414C>G
1	ZC3H12A	Exon4	frameshift insertion	c.639dupA
1	ZC3H12C	Exon4	frameshift insertion	c.1066dupT
1	ZC3H12D	Exon4	frameshift insertion	c.482dupT
1	ZC3H14	Exon11	frameshift deletion	c.1445delA
1	ZC3H15	Exon6	frameshift deletion	c.693_694delAT
1	ZC3H18	Exon17	frameshift deletion	c.2627_2631delGCCAG
1	ZC3H18	Exon17	frameshift deletion	c.2627delG
2	ZC3H6	Exon9	frameshift deletion	c.1181delC
1	ZCCHC13	Exon1	frameshift deletion	c.415delG
1	ZCCHC16	Exon3	stopgain SNV	c.187C>T
1	ZCCHC18	Exon3	frameshift insertion	c.373dupG
2	ZCCHC4	Exon12	frameshift deletion	c.1286delA
1	ZCCHC4	Exon13	frameshift deletion	c.1522delC
1	ZCCHC4	Exon13	stoploss SNV	c.1540T>C
1	ZCRB1	Exon6	frameshift deletion	c.416_419delAAAA
1	ZCRB1	Exon5	stopgain SNV	c.289C>T
1	ZCWPW2	Exon5	frameshift deletion	c.651delG
1	ZDBF2	Exon5	frameshift deletion	c.5308delA
1	ZDHHC13	Exon5	splicing	c.375-2A>G
1	ZDHHC1	Exon5	frameshift deletion	c.494_498delAGTGG
1	ZDHHC4	Exon3	splicing	c.117+1_117+1delG
1	ZDHHC8	Exon4	frameshift insertion	c.386dupA
1	ZDHHC8	Exon5	frameshift insertion	c.621_622insTT
11	ZEB2	Exon6	stopgain SNV	c.660C>A
2	ZFHX3	Exon8	stopgain SNV	c.4478T>A
1	ZFHX4	Exon10	frameshift insertion	c.8759_8760insT
1	ZFP37	Exon4	stopgain SNV	c.1253C>A
1	ZFP37	Exon1	frameshift	c.52delC

			deletion	
1	ZFP41	Exon2	stoploss SNV	c.597A>G
1	ZFP91	Exon5	splicing	c.618-1G>A
1	ZFR2	Exon10	frameshift deletion	c.1552delC
2	ZFR	Exon20	stoploss SNV	c.3225A>C
1	ZFR	Exon6	frameshift insertion	c.868dupG
1	ZFYVE16	Exon3	frameshift deletion	c.1368_1371delAGAT
11	ZFYVE19	Exon1	frameshift insertion	c.118_122dupGGGGC
1	ZFYVE20	Exon14	frameshift deletion	c.1222delC
1	ZFYVE26	Exon26	frameshift deletion	c.5104delC
1	ZFYVE26	Exon11	stopgain SNV	c.1665C>A
11	ZFYVE9	Exon4	stopgain SNV	c.647T>A
3	ZHX2	Exon3	frameshift deletion	c.285delG
1	ZHX3	Exon3	frameshift deletion	c.2701delG
1	ZHX3	Exon3	frameshift deletion	c.925delT
1	ZHX3	Exon3	frameshift deletion	c.779delC
1	ZIK1	Exon4	frameshift deletion	c.1245delC
1	ZIK1	Exon4	frameshift deletion	c.1459_1460delAC
9	ZIM3	Exon5	stopgain SNV	c.1312A>T
1	ZIM3	Exon5	frameshift deletion	c.1132delC
1	ZIM3	Exon5	stopgain SNV	c.954C>A
1	ZIM3	Exon5	stopgain SNV	c.785G>A
1	ZKSCAN1	Exon2	stopgain SNV	c.157G>T
1	ZKSCAN3	Exon7	frameshift deletion	c.976_977delAA
1	ZKSCAN4	Exon5	frameshift insertion	c.1569_1570insC
1	ZKSCAN4	Exon5	frameshift deletion	c.1566delA
1	ZKSCAN4	Exon5	frameshift insertion	c.989_990insAG
1	ZKSCAN4	Exon5	frameshift deletion	c.982delA
1	ZMIZ1	Exon7	stopgain SNV	c.273_274insTAGC
1	ZMIZ1	Exon8	frameshift deletion	c.333delT
1	ZMIZ2	Exon16	frameshift deletion	c.2105delG

1	ZMYM1	Exon10	stopgain SNV	c.2258C>G
2	ZMYM3	Exon5	stopgain SNV	c.1048A>T
3	ZMYM4	Exon11	splicing	c.1721-1G>C
2	ZMYM5	Exon3	stopgain SNV	c.146C>G
2	ZMYND10	Exon6	stopgain SNV	c.566C>G
1	ZMYND12	Exon7	stopgain SNV	c.743C>A
2	ZMYND12	Exon7	frameshift deletion	c.673delA
1	ZMYND15	Exon7	frameshift deletion	c.1371delT
2	ZMYND15	Exon13	splicing	c.2057+1_2057+1delG
1	ZMYND15	Exon13	splicing	c.2057+2_2057+2delT
3	ZMYND17	Exon7	frameshift deletion	c.1178delT
1	ZMYND17	Exon4	frameshift insertion	c.501dupA
1	ZMYND19	Exon4	frameshift insertion	c.236dupG
8	ZNF100	Exon5	stopgain SNV	c.989C>A
1	ZNF100	Exon5	frameshift deletion	c.590_594delTAAGA
4	ZNF107	Exon7	frameshift insertion	c.2336dupA
3	ZNF107	Exon7	frameshift insertion	c.2337_2338insAA
1	ZNF114	Exon5	frameshift deletion	c.287_288delAG
1	ZNF133	Exon7	frameshift deletion	c.1742_1743delAG
1	ZNF135	Exon4	frameshift insertion	c.889_890insCAAT
4	ZNF140	Exon5	frameshift insertion	c.999dupA
1	ZNF142	Exon8	frameshift deletion	c.3480_3481delTG
1	ZNF142	Exon8	frameshift deletion	c.3478delA
1	ZNF148	Exon9	stopgain SNV	c.1553T>G
7	ZNF154	Exon3	stopgain SNV	c.574C>T
1	ZNF155	Exon5	frameshift deletion	c.933_934delAG
1	ZNF175	Exon3	frameshift insertion	c.140_141insA
1	ZNF175	Exon5	frameshift insertion	c.1350_1351insGT
1	ZNF175	Exon5	frameshift deletion	c.1944_1945delTG
1	ZNF182	Exon7	frameshift deletion	c.1839delT
1	ZNF19	Exon5	frameshift insertion	c.229dupG
2	ZNF211	Exon4	stopgain	c.1650T>A

			SNV	
2	ZNF212	Exon5	stopgain SNV	c.670C>T
1	ZNF215	Exon6	splicing	c.712+1G>A
1	ZNF221	Exon6	frameshift deletion	c.339delA
1	ZNF221	Exon6	frameshift deletion	c.947delG
1	ZNF222	Exon4	frameshift deletion	c.1233_1237delCTGTA
4	ZNF223	Exon5	stopgain SNV	c.534T>A
1	ZNF224	Exon6	frameshift deletion	c.674delT
1	ZNF224	Exon6	stopgain SNV	c.986C>G
1	ZNF227	Exon6	frameshift insertion	c.1061dupG
1	ZNF227	Exon6	frameshift deletion	c.2328_2329delAT
3	ZNF229	Exon6	frameshift insertion	c.2045dupA
1	ZNF229	Exon4	stopgain SNV	c.91C>T
1	ZNF233	Exon5	stopgain SNV	c.548G>A
1	ZNF238	Exon2	stopgain SNV	c.1522A>T
1	ZNF253	Exon4	stopgain SNV	c.799C>T
1	ZNF253	Exon4	stopgain SNV	c.1429C>T
1	ZNF254	Exon4	stopgain SNV	c.829C>T
1	ZNF256	Exon3	splicing	c.160+2T>C
1	ZNF260	Exon4	frameshift insertion	c.1162dupT
1	ZNF267	Exon4	stopgain SNV	c.619C>T
1	ZNF273	Exon4	stopgain SNV	c.417T>G
1	ZNF273	Exon4	frameshift deletion	c.1251delT
1	ZNF273	Exon4	frameshift deletion	c.1253_1254delCT
1	ZNF277	Exon5	frameshift insertion	c.505dupA
1	ZNF280A	Exon2	frameshift deletion	c.733delG
1	ZNF281	Exon2	frameshift deletion	c.2183delT
1	ZNF286A	Exon6	frameshift deletion	c.836delC
4	ZNF286B	Exon5	stopgain SNV	c.1120C>T
1	ZNF28	Exon4	frameshift deletion	c.1756_1757delAA
4	ZNF28	Exon4	frameshift deletion	c.954_958delGATAA
1	ZNF28	Exon4	frameshift	c.696dupA

			insertion	
1	ZNF28	Exon4	frameshift deletion	c.628_629delAT
1	ZNF28	Exon3	stopgain SNV	c.55C>T
2	ZNF292	Exon8	frameshift insertion	c.1326dupT
1	ZNF295	Exon3	frameshift deletion	c.1388delC
1	ZNF2	Exon5	frameshift deletion	c.852delT
1	ZNF2	Exon5	frameshift insertion	c.1199_1200insT
1	ZNF300	Exon6	frameshift deletion	c.1557delA
1	ZNF302	Exon3	stopgain SNV	c.10delG
1	ZNF318	Exon4	frameshift insertion	c.2653_2654insA
2	ZNF323	Exon3	frameshift deletion	c.477_478delAG
1	ZNF334	Exon6	frameshift deletion	c.226_227delAA
1	ZNF335	Exon28	frameshift deletion	c.4012_4013delAC
1	ZNF335	Exon28	frameshift deletion	c.4004_4005delAC
1	ZNF335	Exon8	frameshift deletion	c.1337_1341delTAGGC
1	ZNF33B	Exon5	frameshift deletion	c.1895_1896delTA
1	ZNF341	Exon13	frameshift insertion	c.1842dupC
3	ZNF343	Exon7	splicing	c.305-2A>T
1	ZNF345	Exon3	stopgain SNV	c.235C>T
1	ZNF345	Exon3	stopgain SNV	c.1446C>A
1	ZNF347	Exon4	frameshift deletion	c.263delT
16	ZNF347	Exon4	frameshift deletion	c.258delA
1	ZNF35	Exon4	frameshift deletion	c.747delC
4	ZNF417	Exon2	stopgain SNV	c.82G>T
1	ZNF423	Exon5	frameshift insertion	c.876_877insAT
1	ZNF425	Exon4	stopgain SNV	c.1303C>T
1	ZNF425	Exon4	frameshift deletion	c.875delA
2	ZNF429	Exon3	stopgain SNV	c.199C>T
8	ZNF429	Exon4	frameshift deletion	c.1580delA
1	ZNF431	Exon3	splicing	c.97-2A>C
1	ZNF433	Exon4	stopgain SNV	c.1228C>T
1	ZNF433	Exon4	frameshift	c.507_508delCT

			deletion	
1	ZNF434	Exon6	stopgain SNV	c.1318C>T
1	ZNF439	Exon1	stopgain SNV	c.37G>T
1	ZNF439	Exon1	splicing	c.175+1G>A
1	ZNF439	Exon3	stopgain SNV	c.1342A>T
1	ZNF440	Exon4	stopgain SNV	c.730C>T
1	ZNF440	Exon4	frameshift insertion	c.947dupA
4	ZNF440	Exon4	stopgain SNV	c.1234C>T
1	ZNF442	Exon6	stoploss SNV	c.1882T>A
1	ZNF442	Exon5	stopgain SNV	c.217G>T
1	ZNF443	Exon4	stopgain SNV	c.456C>G
1	ZNF446	Exon4	frameshift deletion	c.618delC
1	ZNF45	Exon10	stopgain SNV	c.2044C>T
1	ZNF45	Exon10	frameshift deletion	c.1906_1909delGGAG
1	ZNF461	Exon6	frameshift deletion	c.633_634delAA
3	ZNF462	Exon3	stopgain SNV	c.3382G>T
3	ZNF462	Exon6	stopgain SNV	c.6195T>G
1	ZNF471	Exon5	frameshift insertion	c.639_640dupAA
1	ZNF473	Exon5	stopgain SNV	c.970G>T
1	ZNF479	Exon5	frameshift insertion	c.741_744dupCAAA
4	ZNF486	Exon4	stopgain SNV	c.630C>G
1	ZNF486	Exon4	frameshift deletion	c.759delT
2	ZNF488	Exon2	frameshift deletion	c.194delC
3	ZNF491	Exon3	stopgain SNV	c.451C>T
1	ZNF496	Exon9	frameshift insertion	c.1602_1603insA
1	ZNF496	Exon9	frameshift deletion	c.1597_1598delICG
1	ZNF496	Exon9	stopgain SNV	c.1186G>T
1	ZNF501	Exon3	frameshift deletion	c.454delC
5	ZNF506	Exon4	frameshift deletion	c.1096delG
1	ZNF513	Exon4	frameshift deletion	c.987_988delTC
1	ZNF513	Exon4	frameshift deletion	c.984delT

1	ZNF513	Exon4	frameshift insertion	c.975_976insA
1	ZNF514	Exon5	stopgain SNV	c.883C>T
1	ZNF516	Exon3	frameshift insertion	c.883dupA
1	ZNF519	Exon3	frameshift deletion	c.1267delC
1	ZNF521	Exon3	frameshift insertion	c.147_148insC
1	ZNF526	Exon3	frameshift deletion	c.297_298delGC
1	ZNF528	Exon7	frameshift deletion	c.381delG
2	ZNF528	Exon7	stopgain SNV	c.1282C>T
1	ZNF530	Exon3	frameshift insertion	c.1323dupG
1	ZNF534	Exon4	stopgain SNV	c.361C>T
1	ZNF534	Exon4	frameshift deletion	c.1510delC
1	ZNF543	Exon3	splicing	c.146-2A>G
5	ZNF543	Exon3	stopgain SNV	c.203G>A
1	ZNF544	Exon6	splicing	c.244+1G>A
5	ZNF544	Exon7	stopgain SNV	c.1042C>T
1	ZNF544	Exon7	stopgain SNV	c.1171C>T
6	ZNF544	Exon7	stopgain SNV	c.1843C>T
2	ZNF546	Exon7	frameshift insertion	c.1012_1013insA
1	ZNF546	Exon7	stopgain SNV	c.1288C>T
1	ZNF546	Exon7	stopgain SNV	c.1624C>T
1	ZNF546	Exon7	stopgain SNV	c.2380C>T
1	ZNF547	Exon4	stopgain SNV	c.888T>G
1	ZNF549	Exon1	stopgain SNV	c.31C>T
1	ZNF551	Exon3	stopgain SNV	c.1342C>T
3	ZNF552	Exon2	stopgain SNV	c.133G>T
1	ZNF554	Exon5	frameshift insertion	c.879dupG
1	ZNF556	Exon3	splicing	c.131-1G>A
1	ZNF556	Exon4	stopgain SNV	c.388C>T
1	ZNF558	Exon6	frameshift deletion	c.1173_1176delTTCT
1	ZNF561	Exon6	frameshift insertion	c.890dupA
4	ZNF561	Exon6	stopgain SNV	c.807T>A
5	ZNF563	Exon4	stopgain	c.1057C>T

			SNV	
1	ZNF567	Exon4	frameshift deletion	c.1717delC
1	ZNF568	Exon9	stopgain SNV	c.1378C>T
1	ZNF569	Exon6	frameshift deletion	c.1176_1177delTC
1	ZNF571	Exon4	stopgain SNV	c.1600C>T
1	ZNF572	Exon3	frameshift deletion	c.1425delA
1	ZNF573	Exon5	frameshift insertion	c.1734dupA
1	ZNF57	Exon4	stopgain SNV	c.1260T>G
1	ZNF582	Exon5	frameshift deletion	c.1433_1434delAT
4	ZNF587	Exon3	stopgain SNV	c.907A>T
1	ZNF587	Exon3	frameshift deletion	c.1505_1508delTTTC
1	ZNF587	Exon3	frameshift deletion	c.1534_1535delAA
1	ZNF594	Exon2	stopgain SNV	c.2050G>T
1	ZNF594	Exon2	stopgain SNV	c.2041C>T
3	ZNF594	Exon2	frameshift deletion	c.1673_1674delAG
1	ZNF594	Exon2	frameshift deletion	c.1054delG
1	ZNF595	Exon4	frameshift deletion	c.638_639delAT
1	ZNF596	Exon6	stopgain SNV	c.1312G>T
1	ZNF599	Exon4	stoploss SNV	c.1764_1765dupTT
2	ZNF599	Exon4	stopgain SNV	c.1258G>T
9	ZNF599	Exon4	frameshift deletion	c.1014_1015delCT
1	ZNF607	Exon5	stopgain SNV	c.1135C>T
1	ZNF608	Exon1	frameshift deletion	c.531delC
1	ZNF611	Exon6	frameshift insertion	c.1795dupT
1	ZNF613	Exon6	frameshift insertion	c.567_570dupTCAC
1	ZNF616	Exon4	stopgain SNV	c.1905C>A
1	ZNF616	Exon4	stopgain SNV	c.1435C>T
1	ZNF618	Exon3	frameshift insertion	c.145dupT
1	ZNF618	Exon9	frameshift deletion	c.692_695delAAGA
1	ZNF619	Exon6	stopgain SNV	c.854C>G
1	ZNF620	Exon3	frameshift deletion	c.112delG

1	ZNF622	Exon1	stopgain SNV	c.343G>T
2	ZNF642	Exon3	splicing	c.128-1G>T
1	ZNF643	Exon5	stopgain SNV	c.838G>T
1	ZNF645	Exon1	frameshift deletion	c.1165_1166delAA
1	ZNF646	Exon2	frameshift insertion	c.2566dupG
1	ZNF648	Exon2	frameshift deletion	c.224delG
1	ZNF655	Exon3	stopgain SNV	c.1168A>T
1	ZNF660	Exon3	frameshift deletion	c.594_595delAT
1	ZNF662	Exon3	stopgain SNV	c.79C>T
1	ZNF664	Exon5	stopgain SNV	c.270C>G
1	ZNF665	Exon4	stopgain SNV	c.1324C>T
1	ZNF667	Exon5	frameshift deletion	c.1593_1594delAT
1	ZNF674	Exon6	frameshift deletion	c.1733delA
1	ZNF674	Exon6	stopgain SNV	c.601C>T
1	ZNF674	Exon6	frameshift insertion	c.280dupG
1	ZNF675	Exon4	frameshift insertion	c.1489dupA
1	ZNF675	Exon4	frameshift deletion	c.933delC
1	ZNF676	Exon4	splicing	c.131-1G>A
1	ZNF677	Exon5	frameshift deletion	c.1690_1691delAG
1	ZNF677	Exon6	splicing	c.170-1G>C
2	ZNF678	Exon3	stopgain SNV	c.196C>T
1	ZNF678	Exon4	frameshift deletion	c.1428_1429delTA
1	ZNF681	Exon4	frameshift deletion	c.1605_1606delAT
1	ZNF681	Exon4	stopgain SNV	c.516delT
1	ZNF681	Exon4	frameshift insertion	c.504dupA
1	ZNF682	Exon4	frameshift deletion	c.291delA
1	ZNF683	Exon6	frameshift insertion	c.1481dupC
8	ZNF687	Exon2	stopgain SNV	c.1112T>A
1	ZNF689	Exon3	stopgain SNV	c.502A>T
1	ZNF689	Exon3	frameshift insertion	c.324dupC
3	ZNF691	Exon2	frameshift deletion	c.358delA
1	ZNF691	Exon2	frameshift	c.363delC

			deletion	
1	ZNF709	Exon4	frameshift deletion	c.287_288delTT
1	ZNF714	Exon4	frameshift deletion	c._del
20	ZNF717	Exon5	frameshift insertion	c.2349_2350dupGA
12	ZNF717	Exon5	stopgain SNV	c.2164A>T
2	ZNF717	Exon5	frameshift deletion	c.2030delT
3	ZNF717	Exon5	frameshift deletion	c.2013delG
1	ZNF717	Exon5	stopgain SNV	c.1957G>T
7	ZNF717	Exon5	frameshift deletion	c.1879delA
9	ZNF717	Exon5	frameshift insertion	c.1731_1732insATTT
10	ZNF717	Exon5	stopgain SNV	c.1729_1730insAAG
2	ZNF717	Exon5	stopgain SNV	c.1726_1727insTATAAGT
10	ZNF717	Exon5	frameshift deletion	c.1506_1507delAG
1	ZNF717	Exon5	frameshift insertion	c.1041_1042insG
18	ZNF717	Exon5	frameshift insertion	c.621dupG
20	ZNF717	Exon5	frameshift insertion	c.370dupA
1	ZNF717	Exon3	frameshift insertion	c.134_135insA
1	ZNF717	Exon3	stopgain SNV	c.107G>A
2	ZNF718	Exon4	frameshift deletion	c.489_493delAAGAT
1	ZNF721	Exon3	frameshift deletion	c.2714_2715delCT
1	ZNF721	Exon3	frameshift deletion	c.1557_1558delTA
1	ZNF721	Exon3	frameshift deletion	c.1254_1255delAT
2	ZNF727	Exon2	stopgain SNV	c.4C>T
4	ZNF727	Exon3	splicing	c.226+1G>A
1	ZNF732	Exon3	stopgain SNV	c.1448T>G
1	ZNF736	Exon3	stopgain SNV	c.101T>G
1	ZNF737	Exon4	frameshift deletion	c.347delG
1	ZNF749	Exon3	frameshift deletion	c.1980_1981delAG
4	ZNF749	Exon3	frameshift insertion	c.2230dupA
1	ZNF75A	Exon6	stopgain SNV	c.298A>T
1	ZNF75D	Exon6	stopgain SNV	c.1274G>A

1	ZNF75D	Exon6	stopgain SNV	c.934C>T
1	ZNF75D	Exon2	frameshift deletion	c.37delA
5	ZNF772	Exon3	stopgain SNV	c.123G>A
1	ZNF773	Exon3	splicing	c.262+1G>A
1	ZNF774	Exon4	frameshift insertion	c.427_428insTCTTGTTTAAA
1	ZNF776	Exon1	splicing	c.33+2T>A
1	ZNF776	Exon3	frameshift deletion	c.1081delT
1	ZNF777	Exon6	frameshift deletion	c.1716delG
1	ZNF778	Exon6	frameshift deletion	c.1332delT
1	ZNF77	Exon4	frameshift insertion	c.759dupC
8	ZNF780B	Exon4	splicing	c.10-2A>G
1	ZNF782	Exon6	frameshift deletion	c.2007_2008delAG
1	ZNF785	Exon3	frameshift insertion	c.1132_1133insAAGT
1	ZNF785	Exon3	frameshift insertion	c.503_504insC
1	ZNF786	Exon2	stopgain SNV	c.102C>G
1	ZNF790	Exon5	frameshift deletion	c.1062_1063delTC
7	ZNF790	Exon5	stopgain SNV	c.895C>T
1	ZNF792	Exon4	frameshift deletion	c.1838delG
1	ZNF792	Exon4	frameshift deletion	c.1834delC
1	ZNF792	Exon4	stopgain SNV	c.1381C>T
1	ZNF792	Exon4	frameshift insertion	c.1217_1218insAG
1	ZNF792	Exon4	frameshift deletion	c.1209delC
1	ZNF792	Exon4	frameshift insertion	c.1204dupT
1	ZNF793	Exon6	frameshift insertion	c.18dupA
1	ZNF79	Exon5	stopgain SNV	c.805C>T
1	ZNF804A	Exon4	frameshift deletion	c.3327_3328delTG
1	ZNF804A	Exon4	frameshift deletion	c.3330delT
2	ZNF804A	Exon4	frameshift insertion	c.3345_3346insC
1	ZNF808	Exon5	frameshift insertion	c.2599_2605dupATAATTC
3	ZNF808	Exon5	stopgain SNV	c.2663C>G
3	ZNF80	Exon1	frameshift deletion	c.694delC
1	ZNF80	Exon1	frameshift	c.320dupG

			insertion	
3	ZNF80	Exon1	stopgain SNV	c.196C>T
1	ZNF80	Exon1	frameshift deletion	c.84delT
5	ZNF812	Exon6	frameshift deletion	c.1210delC
2	ZNF812	Exon5	stopgain SNV	c.165G>A
1	ZNF813	Exon4	frameshift deletion	c.772_773delCC
1	ZNF813	Exon4	frameshift deletion	c.802delG
6	ZNF813	Exon4	frameshift deletion	c.1337_1338delAA
1	ZNF816	Exon5	frameshift insertion	c.1472dupG
2	ZNF816- ZNF321P	Exon3	frameshift deletion	c.90delT
1	ZNF823	Exon4	stopgain SNV	c.1294C>T
1	ZNF827	Exon2	frameshift deletion	c.801_802delTG
1	ZNF835	Exon2	stopgain SNV	c.1423G>T
1	ZNF835	Exon2	frameshift insertion	c.861_862insA
1	ZNF835	Exon2	frameshift deletion	c.486delC
1	ZNF835	Exon2	frameshift deletion	c.465_468delGCAC
1	ZNF835	Exon2	frameshift deletion	c.1delA
1	ZNF839	Exon3	frameshift insertion	c.1406_1410dupGGCTC
3	ZNF83	Exon7	stopgain SNV	c.923G>A
6	ZNF844	Exon4	frameshift deletion	c.1041_1045delTTATC
3	ZNF844	Exon4	frameshift deletion	c.1383_1384delCA
1	ZNF844	Exon4	stopgain SNV	c.1399G>T
1	ZNF846	Exon6	frameshift deletion	c.1213_1216delAATT
1	ZNF846	Exon6	stopgain SNV	c.1087G>T
1	ZNF85	Exon3	frameshift deletion	c.131delG
18	ZNF860	Exon2	stopgain SNV	c.427C>T
1	ZNF862	Exon7	stopgain SNV	c.1414C>T
3	ZNF879	Exon4	splicing	c.161-2A>G
1	ZNF883	Exon5	stopgain SNV	c.1001C>G
1	ZNF883	Exon5	frameshift insertion	c.684_685insC
1	ZNF90	Exon4	frameshift deletion	c.901delT

1	ZNF90	Exon4	frameshift insertion	c.1362dupA
1	ZNF93	Exon4	frameshift deletion	c.1847delC
1	ZNF99	Exon4	stopgain SNV	c.1979G>A
1	ZNF99	Exon4	stopgain SNV	c.1726C>T
1	ZNF99	Exon4	frameshift insertion	c.1176dupT
1	ZNHIT3	Exon2	frameshift deletion	c.98delT
1	ZNHIT6	Exon7	splicing	c.1088+2dupT
1	ZP1	Exon1	frameshift deletion	c.147delG
1	ZP1	Exon10	frameshift deletion	c.1620delG
1	ZP1	Exon10	frameshift deletion	c.1625delG
1	ZP2	Exon1	stopgain SNV	c.13C>T
10	ZP3	Exon9	frameshift insertion	c.936dupG
1	ZP4	Exon9	stopgain SNV	c.1207C>T
3	ZRANB3	Exon20	splicing	c.3009+2T>C
2	ZRANB3	Exon5	splicing	c.359+2T>G
1	ZSCAN16	Exon4	stopgain SNV	c.703C>T
1	ZSCAN1	Exon6	frameshift deletion	c.1154delG
1	ZSCAN22	Exon2	frameshift insertion	c.340_341insT
1	ZSCAN22	Exon3	stopgain SNV	c.1243C>T
1	ZSCAN5B	Exon4	frameshift insertion	c.870_873dupTCTG
5	ZSWIM1	Exon2	stopgain SNV	c.26G>A
1	ZSWIM2	Exon9	stopgain SNV	c.1178T>A
1	ZSWIM3	Exon2	frameshift insertion	c.1493dupT
2	ZSWIM4	Exon8	splicing	c.1319-1G>C
1	ZSWIM6	Exon14	frameshift deletion	c.2868_2869delCC
1	ZSWIM7	Exon4	frameshift deletion	c.231_232delAT
1	ZUFSP	Exon9	stopgain SNV	c.1510C>T
1	ZWINT	Exon6	frameshift deletion	c.537_538delAG
1	ZWINT	Exon3	frameshift insertion	c.181_182dupGA
1	ZXDA	Exon1	stopgain SNV	c.1096G>T
1	ZXDB	Exon1	frameshift deletion	c.1525_1526delCT
1	ZXDC	Exon9	splicing	c.2213-1G>A

