

**IDENTIFICATION OF SUSCEPTIBILITY VARIANTS IN PRION  
DISEASE BY INTEGRATIVE CAUSAL ANALYSIS:  
SUPPLEMENTARY INFORMATION I – CELLULAR  
COMPARTMENTS**

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TABLE 1. List of Reactome entity compartments.

<b>GO name</b>	<b>GO ID</b>
ER to Golgi transport vesicle	0030134
ER to Golgi transport vesicle membrane	0012507
Golgi lumen	0005796
Golgi membrane	0000139
Golgi-associated vesicle	0005798
Golgi-associated vesicle lumen	0070931
Golgi-associated vesicle membrane	0030660
autophagosome	0005776
autophagosome membrane	0000421
axonemal microtubule	0005879
azurophil granule lumen	0035578
cell junction	0030054
cell wall	0005618
chromosome	0005694
chromosome, centromeric region	0000775
ciliary basal body	0036064
ciliary base	0097546
ciliary membrane	0060170
ciliary tip	0097542
clathrin-coated endocytic vesicle	0045334
clathrin-coated endocytic vesicle membrane	0030669
clathrin-sculpted acetylcholine transport vesicle lumen	0060202
clathrin-sculpted acetylcholine transport vesicle membrane	0060201
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200
clathrin-sculpted gamma-aminobutyric acid transport vesicle lumen	0061201
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202
clathrin-sculpted glutamate transport vesicle	0060199
clathrin-sculpted glutamate transport vesicle lumen	0060204
clathrin-sculpted glutamate transport vesicle membrane	0060203
clathrin-sculpted monoamine transport vesicle lumen	0070082
clathrin-sculpted monoamine transport vesicle membrane	0070083
cytoplasm	0005737
cytoplasmic membrane-bounded vesicle lumen	0060205
cytoplasmic microtubule	0005881
cytoplasmic side of plasma membrane	0009898
cytoplasmic vesicle membrane	0030659
cytosol	0005829
early endosome	0005769
early endosome lumen	0031905
early endosome membrane	0031901
endocytic vesicle	0030139
endocytic vesicle lumen	0071682
endocytic vesicle membrane	0030666
endolysosome	0036019

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<b>GO name</b>	<b>GO ID</b>
endolysosome lumen	0036021
endolysosome membrane	0036020
endoplasmic reticulum lumen	0005788
endoplasmic reticulum membrane	0005789
endoplasmic reticulum quality control compartment	0044322
endoplasmic reticulum-Golgi intermediate compartment	0005793
endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
endosome	0005768
endosome lumen	0031904
endosome membrane	0010008
external side of plasma membrane	0009897
extracellular exosome	0070062
extracellular region	0005576
host cell cytosol	0044164
integral component of cytoplasmic side of endoplasmic reticulum membrane	0071458
integral component of luminal side of endoplasmic reticulum membrane	0071556
integrin complex	0008305
lamellar body	0042599
lamellar body membrane	0097232
late endosome lumen	0031906
late endosome membrane	0031902
lipid particle	0005811
lysosomal lumen	0043202
lysosomal membrane	0005765
melanosome	0042470
melanosome lumen	0034493
melanosome membrane	0033162
microtubule	0005874
mitochondrial inner membrane	0005743
mitochondrial intermembrane space	0005758
mitochondrial matrix	0005759
mitochondrial outer membrane	0005741
mitochondrion	0005739
multivesicular body	0005771
multivesicular body lumen	0097486
multivesicular body, internal vesicle	0097487
nuclear envelope	0005635
nucleoplasm	0005654
organelle lumen	0043233
other organism cell	0044216
periplasmic space	0042597
peroxisomal matrix	0005782
peroxisomal membrane	0005778
phagocytic cup	0001891
phagocytic vesicle	0045335
phagocytic vesicle lumen	0097013
phagocytic vesicle membrane	0030670
phagolysosome	0032010
photoreceptor disc membrane	0097381
photoreceptor inner segment	0001917
photoreceptor inner segment membrane	0060342
photoreceptor outer segment	0001750
photoreceptor outer segment membrane	0042622
plasma membrane	0005886
plastid	0009536
plastid stroma	0009532
platelet alpha granule lumen	0031093
platelet alpha granule membrane	0031092
platelet dense granule lumen	0031089
platelet dense granule membrane	0031088
platelet dense tubular network lumen	0031096
platelet dense tubular network membrane	0031095
pre-autophagosomal structure membrane	0034045

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GO name	GO ID
primary cilium	0072372
proteinaceous extracellular matrix	0005578
sarcoplasmic reticulum lumen	0033018
sarcoplasmic reticulum membrane	0033017
secretory granule lumen	0034774
secretory granule membrane	0030667
sperm flagellum	0036126
synaptic vesicle	0008021
synaptic vesicle lumen	0034592
synaptic vesicle membrane	0030672
trans-Golgi network membrane	0032588
transport vesicle	0030133
transport vesicle membrane	0030658
viral envelope	0019031
viral tegument	0019033
virion membrane	0055036

TABLE 2. List of specific compartments.

GO name	GO ID
autophagosome lumen	0034423
autophagosome membrane	0000421
azurophil granule membrane	0035577
azurophil granule lumen	0035578
cell junction	0030054
chromosome, centromeric region	0000775
clathrin-coated endocytic vesicle membrane	0030669
clathrin-sculpted acetylcholine transport vesicle lumen	0060202
clathrin-sculpted acetylcholine transport vesicle membrane	0060201
clathrin-sculpted gamma-aminobutyric acid transport vesicle lumen	0061201
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202
clathrin-sculpted glutamate transport vesicle lumen	0060204
clathrin-sculpted glutamate transport vesicle membrane	0060203
clathrin-sculpted monoamine transport vesicle lumen	0070082
clathrin-sculpted monoamine transport vesicle membrane	0070083
cytoplasmic side of endoplasmic reticulum membrane	0098554
cytoplasmic side of plasma membrane	0009898
cytosol	0005829
early endosome lumen	0031905
early endosome membrane	0031901
endolysosome lumen	0036021
endolysosome membrane	0036020
endoplasmic reticulum quality control compartment	0044322
endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
extracellular region	0005576
ER to Golgi transport vesicle membrane	0012507
external side of plasma membrane	0009897
Golgi-associated vesicle lumen	0070931
Golgi-associated vesicle membrane	0030660
lamellar body membrane	0097232
lipid particle	0005811
luminal side of endoplasmic reticulum membrane	0098553
melanosome lumen	0034493
melanosome membrane	0033162
mitochondrial inner membrane	0005743
mitochondrial intermembrane space	0005758
mitochondrial matrix	0005759
mitochondrial outer membrane	0005741
multivesicular body lumen	0097486
multivesicular body membrane	0032585
multivesicular body, internal vesicle lumen	0097489
multivesicular body, internal vesicle membrane	0097488

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<b>GO name</b>	<b>GO ID</b>
nuclear envelope	0005635
nucleoplasm	0005654
peroxisomal matrix	0005782
peroxisomal membrane	0005778
phagocytic cup	0001891
phagolysosome membrane	0061474
photoreceptor disc membrane	0097381
photoreceptor inner segment membrane	0060342
photoreceptor outer segment membrane	0042622
platelet alpha granule lumen	0031093
platelet alpha granule membrane	0031092
platelet dense granule lumen	0031089
platelet dense granule membrane	0031088
platelet dense tubular network lumen	0031096
platelet dense tubular network membrane	0031095
pre-autophagosomal structure membrane	0034045
sarcoplasmic reticulum lumen	0033018
sarcoplasmic reticulum membrane	0033017
sperm flagellum	0036126
synaptic vesicle lumen	0034592
synaptic vesicle membrane	0030672
trans-Golgi network membrane	0032588

TABLE 3. List of general compartments.

<b>GO name</b>	<b>GO ID</b>
azurophil granule	0042582
autophagosome	0005776
chromosome	0005694
clathrin-coated endocytic vesicle	0045334
clathrin-sculpted acetylcholine transport vesicle	0060200
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200
clathrin-sculpted glutamate transport vesicle	0060199
clathrin-sculpted monoamine transport vesicle	0070081
early endosome	0005769
endolysosome	0036019
endocytic vesicle	0030139
endocytic vesicle lumen	0071682
endocytic vesicle membrane	0030666
endoplasmic reticulum	0005783
endoplasmic reticulum lumen	0005788
endoplasmic reticulum membrane	0005789
endoplasmic reticulum-Golgi intermediate compartment	0005793
ER to Golgi transport vesicle	0030134
Golgi apparatus	0005794
Golgi lumen	0005796
Golgi membrane	0000139
Golgi-associated vesicle	0005798
lamellar body	0042599
late endosome	0005770
late endosome lumen	0031906
late endosome membrane	0031902
lysosome	0005764
lysosomal lumen	0043202
lysosomal membrane	0005765
melanosome	0042470
mitochondrion	0005739
multivesicular body	0005771
multivesicular body, internal vesicle	0097487
peroxisome	0005777
phagocytic vesicle	0045335
phagocytic vesicle lumen	0097013
phagocytic vesicle membrane	0030670

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<b>GO name</b>	<b>GO ID</b>
phagolysosome	0032010
photoreceptor inner segment	0001917
photoreceptor outer segment	0001750
plasma membrane	0005886
platelet alpha granule	0031091
platelet dense granule	0042827
platelet dense tubular network	0031094
pre-autophagosomal structure	0000407
primary cilium	0072372
sarcoplasmic reticulum	0016529
secretory granule	0030141
secretory granule lumen	0034774
secretory granule membrane	0030667
synaptic vesicle	0008021
trans-Golgi network	0005802

TABLE 4. List of adjacent compartments.

GO name 1	GO ID	GO name 2	GO ID
cytosol	0005829	nuclear envelope	0005635
nuclear envelope	0005635	nucleoplasm	0005654
chromosome, centromeric region	0000775	nucleoplasm	0005654
chromosome, centromeric region	0000775	cytosol	0005829
chromosome	0005694	nucleoplasm	0005654
chromosome	0005694	cytosol	0005829
chromosome	0005694	mitochondrial matrix	0005759
chromosome	0005694	mitochondrion	0005739
chromosome	0005694	chromosome, centromeric region	0000775
cytosol	0005829	mitochondrial outer membrane	0005741
cytosol	0005829	mitochondrion	0005739
mitochondrial outer membrane	0005741	mitochondrial intermembrane space	0005758
mitochondrial intermembrane space	0005758	mitochondrial inner membrane	0005743
mitochondrial inner membrane	0005743	mitochondrial matrix	0005759
mitochondrial inner membrane	0005743	mitochondrial outer membrane	0005741
mitochondrial inner membrane	0005743	cytosol	0005829
mitochondrion	0005739	mitochondrial outer membrane	0005741
mitochondrion	0005739	mitochondrial intermembrane space	0005758
mitochondrion	0005739	mitochondrial inner membrane	0005743
mitochondrion	0005739	mitochondrial matrix	0005759
cytosol	0005829	peroxisomal membrane	0005778
cytosol	0005829	peroxisome	0005777
peroxisomal membrane	0005778	peroxisomal matrix	0005782
peroxisome	0005777	peroxisomal membrane	0005778
peroxisome	0005777	peroxisomal matrix	0005782
cytosol	0005829	cytoplasmic side of endoplasmic reticulum membrane	0098554
cytosol	0005829	endoplasmic reticulum membrane	0005789
luminal side of endoplasmic reticulum membrane	0098553	endoplasmic reticulum lumen	0005788
endoplasmic reticulum membrane	0005789	endoplasmic reticulum lumen	0005788
endoplasmic reticulum lumen	0005788	endoplasmic reticulum quality control compartment	0044322
endoplasmic reticulum membrane	0005789	cytoplasmic side of endoplasmic reticulum membrane	0098554
endoplasmic reticulum membrane	0005789	luminal side of endoplasmic reticulum membrane	0098553
endoplasmic reticulum	0005783	endoplasmic reticulum membrane	0005789
endoplasmic reticulum	0005783	cytoplasmic side of endoplasmic reticulum membrane	0098554
endoplasmic reticulum	0005783	luminal side of endoplasmic reticulum membrane	0098553
endoplasmic reticulum	0005783	endoplasmic reticulum lumen	0005788
endoplasmic reticulum	0005783	endoplasmic reticulum quality control compartment	0044322
cytosol	0005829	sarcoplasmic reticulum membrane	0033017
cytosol	0005829	sarcoplasmic reticulum	0016529
sarcoplasmic reticulum membrane	0033017	sarcoplasmic reticulum lumen	0033018
sarcoplasmic reticulum	0016529	sarcoplasmic reticulum membrane	0033017

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<b>GO name 1</b>	<b>GO ID</b>	<b>GO name 2</b>	<b>GO ID</b>
sarcoplasmic reticulum	0016529	sarcoplasmic reticulum lumen	0033018
cytosol	0005829	lipid particle	0005811
cytosol	0005829	endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
cytosol	0005829	endoplasmic reticulum-Golgi intermediate compartment	0005793
endoplasmic reticulum-Golgi intermediate compartment	0005793	endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
cytosol	0005829	ER to Golgi transport vesicle membrane	0012507
cytosol	0005829	ER to Golgi transport vesicle	0030134
ER to Golgi transport vesicle	0030134	ER to Golgi transport vesicle membrane	0012507
cytosol	0005829	Golgi membrane	0000139
cytosol	0005829	Golgi apparatus	0005794
Golgi membrane	0000139	Golgi lumen	0005796
Golgi apparatus	0005794	Golgi membrane	0000139
Golgi apparatus	0005794	Golgi lumen	0005796
cytosol	0005829	trans-Golgi network membrane	0032588
cytosol	0005829	trans-Golgi network	0005802
trans-Golgi network	0005802	trans-Golgi network membrane	0032588
trans-Golgi network	0005802	Golgi apparatus	0005794
trans-Golgi network membrane	0032588	Golgi apparatus	0005794
cytosol	0005829	Golgi-associated vesicle membrane	0030660
cytosol	0005829	Golgi-associated vesicle	0005798
Golgi-associated vesicle membrane	0030660	Golgi-associated vesicle lumen	0070931
Golgi-associated vesicle	0005798	Golgi-associated vesicle membrane	0030660
Golgi-associated vesicle	0005798	Golgi-associated vesicle lumen	0070931
Golgi-associated vesicle	0005798	Golgi apparatus	0005794
cytosol	0005829	cytoplasmic side of plasma membrane	0009898
cytosol	0005829	plasma membrane	0005886
external side of plasma membrane	0009897	extracellular region	0005576
plasma membrane	0005886	extracellular region	0005576
plasma membrane	0005886	external side of plasma membrane	0009897
plasma membrane	0005886	cytoplasmic side of plasma membrane	0009898
cytosol	0005829	cell junction	0030054
cell junction	0030054	cytoplasmic side of plasma membrane	0009898
cell junction	0030054	external side of plasma membrane	0009897
cell junction	0030054	plasma membrane	0005886
cytosol	0005829	primary cilium	0072372
primary cilium	0072372	extracellular region	0005576
primary cilium	0072372	external side of plasma membrane	0009897
primary cilium	0072372	cytoplasmic side of plasma membrane	0009898
primary cilium	0072372	plasma membrane	0005886
cytosol	0005829	sperm flagellum	0036126
sperm flagellum	0036126	extracellular region	0005576
sperm flagellum	0036126	external side of plasma membrane	0009897
sperm flagellum	0036126	cytoplasmic side of plasma membrane	0009898

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GO name 1	GO ID	GO name 2	GO ID
sperm flagellum	0036126	plasma membrane	0005886
external side of plasma membrane	0009897	photoreceptor inner segment membrane	0060342
external side of plasma membrane	0009897	photoreceptor inner segment	0001917
cytoplasmic side of plasma membrane	0009898	photoreceptor inner segment membrane	0060342
cytoplasmic side of plasma membrane	0009898	photoreceptor inner segment	0001917
plasma membrane	0005886	photoreceptor inner segment membrane	0060342
plasma membrane	0005886	photoreceptor inner segment	0001917
cytosol	0005829	photoreceptor inner segment membrane	0060342
cytosol	0005829	photoreceptor inner segment	0001917
photoreceptor inner segment membrane	0060342	extracellular region	0005576
photoreceptor inner segment	0001917	extracellular region	0005576
photoreceptor inner segment membrane	0060342	photoreceptor outer segment membrane	0042622
photoreceptor inner segment	0001917	photoreceptor outer segment membrane	0042622
photoreceptor inner segment	0001917	photoreceptor outer segment	0001750
cytosol	0005829	photoreceptor outer segment membrane	0042622
cytosol	0005829	photoreceptor outer segment	0001750
photoreceptor outer segment membrane	0042622	extracellular region	0005576
photoreceptor outer segment	0001750	extracellular region	0005576
cytosol	0005829	photoreceptor disc membrane	0097381
photoreceptor disc membrane	0097381	photoreceptor outer segment membrane	0042622
photoreceptor disc membrane	0097381	photoreceptor outer segment	0001750
photoreceptor inner segment	0001917	photoreceptor inner segment membrane	0060342
photoreceptor outer segment	0001750	photoreceptor outer segment membrane	0042622
cytosol	0005829	clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202
cytosol	0005829	clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202	clathrin-sculpted gamma-aminobutyric acid transport vesicle lumen	0061201
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200	clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200	clathrin-sculpted gamma-aminobutyric acid transport vesicle lumen	0061201
cytosol	0005829	clathrin-sculpted acetylcholine transport vesicle membrane	0060201
cytosol	0005829	clathrin-sculpted acetylcholine transport vesicle	0060200
clathrin-sculpted acetylcholine transport vesicle membrane	0060201	clathrin-sculpted acetylcholine transport vesicle lumen	0060202
clathrin-sculpted acetylcholine transport vesicle	0060200	clathrin-sculpted acetylcholine transport vesicle membrane	0060201
clathrin-sculpted acetylcholine transport vesicle	0060200	clathrin-sculpted acetylcholine transport vesicle lumen	0060202
cytosol	0005829	clathrin-sculpted glutamate transport vesicle membrane	0060203
cytosol	0005829	clathrin-sculpted glutamate transport vesicle	0060199
clathrin-sculpted glutamate transport vesicle membrane	0060203	clathrin-sculpted glutamate transport vesicle lumen	0060204
clathrin-sculpted glutamate transport vesicle	0060199	clathrin-sculpted glutamate transport vesicle membrane	0060203
clathrin-sculpted glutamate transport vesicle	0060199	clathrin-sculpted glutamate transport vesicle lumen	0060204
cytosol	0005829	clathrin-sculpted monoamine transport vesicle membrane	0070083
cytosol	0005829	clathrin-sculpted monoamine transport vesicle	0070081
clathrin-sculpted monoamine transport vesicle membrane	0070083	clathrin-sculpted monoamine transport vesicle lumen	0070082
clathrin-sculpted monoamine transport vesicle	0070081	clathrin-sculpted monoamine transport vesicle membrane	0070083
clathrin-sculpted monoamine transport vesicle	0070081	clathrin-sculpted monoamine transport vesicle lumen	0070082

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GO name 1	GO ID	GO name 2	GO ID
cytosol	0005829	secretory granule membrane	0030667
cytosol	0005829	secretory granule	0030141
secretory granule membrane	0030667	secretory granule lumen	0034774
secretory granule	0030141	secretory granule membrane	0030667
secretory granule	0030141	secretory granule lumen	0034774
cytosol	0005829	lamellar body	0042599
cytosol	0005829	lamellar body membrane	0097232
lamellar body	0042599	lamellar body membrane	0097232
cytosol	0005829	melanosome membrane	0033162
cytosol	0005829	melanosome	0042470
melanosome membrane	0033162	melanosome lumen	0034493
melanosome	0042470	melanosome membrane	0033162
melanosome	0042470	melanosome lumen	0034493
cytosol	0005829	synaptic vesicle membrane	0030672
cytosol	0005829	synaptic vesicle	0008021
synaptic vesicle membrane	0030672	synaptic vesicle lumen	0034592
synaptic vesicle	0008021	synaptic vesicle membrane	0030672
synaptic vesicle	0008021	synaptic vesicle lumen	0034592
cytosol	0005829	platelet dense tubular network membrane	0031095
platelet dense tubular network membrane	0031095	platelet dense tubular network	0031094
platelet dense tubular network	0031094	platelet dense tubular network lumen	0031096
platelet dense tubular network	0031094	platelet dense tubular network membrane	0031095
platelet dense tubular network	0031094	platelet dense tubular network lumen	0031096
cytosol	0005829	platelet alpha granule membrane	0031092
cytosol	0005829	platelet alpha granule	0031091
platelet alpha granule membrane	0031092	platelet alpha granule lumen	0031093
platelet alpha granule	0031091	platelet alpha granule membrane	0031092
platelet alpha granule	0031091	platelet alpha granule lumen	0031093
cytosol	0005829	platelet dense granule membrane	0031088
cytosol	0005829	platelet dense granule	0042827
platelet dense granule membrane	0031088	platelet dense granule lumen	0031089
platelet dense granule	0042827	platelet dense granule membrane	0031088
platelet dense granule	0042827	platelet dense granule lumen	0031089
cytosol	0005829	clathrin-coated endocytic vesicle membrane	0030669
cytosol	0005829	clathrin-coated endocytic vesicle	0045334
clathrin-coated endocytic vesicle	0045334	clathrin-coated endocytic vesicle membrane	0030669
cytosol	0005829	endocytic vesicle membrane	0030666
cytosol	0005829	endocytic vesicle	0030139
endocytic vesicle membrane	0030666	endocytic vesicle lumen	0071682
endocytic vesicle	0030139	endocytic vesicle membrane	0030666
endocytic vesicle	0030139	endocytic vesicle lumen	0071682
cytosol	0005829	phagocytic cup	0001891
phagocytic cup	0001891	external side of plasma membrane	0009897

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<b>GO name 1</b>	<b>GO ID</b>	<b>GO name 2</b>	<b>GO ID</b>
phagocytic cup	0001891	cytoplasmic side of plasma membrane	0009898
phagocytic cup	0001891	plasma membrane	0005886
phagocytic cup	0001891	extracellular region	0005576
cytosol	0005829	early endosome membrane	0031901
cytosol	0005829	early endosome	0005769
early endosome membrane	0031901	early endosome lumen	0031905
early endosome	0005769	early endosome membrane	0031901
early endosome	0005769	early endosome lumen	0031905
cytosol	0005829	multivesicular body membrane	0032585
cytosol	0005829	multivesicular body	0005771
multivesicular body membrane	0032585	multivesicular body lumen	0097486
multivesicular body	0005771	multivesicular body membrane	0032585
multivesicular body	0005771	multivesicular body lumen	0097486
multivesicular body	0005771	multivesicular body, internal vesicle	0097487
multivesicular body	0005771	multivesicular body, internal vesicle membrane	0097488
multivesicular body	0005771	multivesicular body, internal vesicle lumen	0097489
multivesicular body lumen	0097486	multivesicular body, internal vesicle membrane	0097488
multivesicular body lumen	0097486	multivesicular body, internal vesicle	0097487
multivesicular body, internal vesicle membrane	0097488	multivesicular body, internal vesicle lumen	0097489
multivesicular body, internal vesicle	0097487	multivesicular body, internal vesicle membrane	0097488
multivesicular body, internal vesicle	0097487	multivesicular body, internal vesicle lumen	0097489
cytosol	0005829	pre-autophagosomal structure membrane	0034045
cytosol	0005829	pre-autophagosomal structure	0000407
cytosol	0005829	phagocytic vesicle membrane	0030670
cytosol	0005829	phagocytic vesicle	0045335
phagocytic vesicle membrane	0030670	phagocytic vesicle lumen	0097013
phagocytic vesicle	0045335	phagocytic vesicle membrane	0030670
phagocytic vesicle	0045335	phagocytic vesicle lumen	0097013
cytosol	0005829	autophagosome membrane	0000421
cytosol	0005829	autophagosome	0005776
autophagosome membrane	0000421	autophagosome lumen	0034423
autophagosome	0005776	autophagosome membrane	0000421
autophagosome	0005776	autophagosome lumen	0034423
cytosol	0005829	late endosome membrane	0031902
cytosol	0005829	late endosome	0005770
late endosome membrane	0031902	late endosome lumen	0031906
late endosome	0005770	late endosome membrane	0031902
late endosome	0005770	late endosome lumen	0031906
cytosol	0005829	lysosomal membrane	0005765
cytosol	0005829	lysosome	0005764
lysosomal membrane	0005765	lysosomal lumen	0043202
lysosome	0005764	lysosomal membrane	0005765
lysosome	0005764	lysosomal lumen	0043202

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<b>GO name 1</b>	<b>GO ID</b>	<b>GO name 2</b>	<b>GO ID</b>
cytosol	0005829	azurophil granule membrane	0035577
cytosol	0005829	azurophil granule	0042582
azurophil granule membrane	0035577	azurophil granule lumen	0035578
azurophil granule	0042582	azurophil granule membrane	0035577
azurophil granule	0042582	azurophil granule lumen	0035578
cytosol	0005829	endolysosome membrane	0036020
cytosol	0005829	endolysosome	0036019
endolysosome membrane	0036020	endolysosome lumen	0036021
endolysosome	0036019	endolysosome membrane	0036020
endolysosome	0036019	endolysosome lumen	0036021
cytosol	0005829	phagolysosome membrane	0061474
cytosol	0005829	phagolysosome	0032010
phagolysosome	0032010	phagolysosome membrane	0061474
cytoplasmic side of endoplasmic reticulum membrane	0098554	ER to Golgi transport vesicle membrane	0012507
cytoplasmic side of endoplasmic reticulum membrane	0098554	ER to Golgi transport vesicle	0030134
endoplasmic reticulum membrane	0005789	ER to Golgi transport vesicle membrane	0012507
endoplasmic reticulum membrane	0005789	ER to Golgi transport vesicle	0030134
endoplasmic reticulum	0005783	ER to Golgi transport vesicle membrane	0012507
endoplasmic reticulum	0005783	ER to Golgi transport vesicle	0030134
ER to Golgi transport vesicle membrane	0012507	endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
ER to Golgi transport vesicle membrane	0012507	endoplasmic reticulum-Golgi intermediate compartment	0005793
ER to Golgi transport vesicle	0030134	endoplasmic reticulum-Golgi intermediate compartment membrane	0033116
ER to Golgi transport vesicle	0030134	endoplasmic reticulum-Golgi intermediate compartment	0005793
Golgi membrane	0000139	Golgi-associated vesicle membrane	0030660
Golgi membrane	0000139	Golgi-associated vesicle	0005798
Golgi apparatus	0005794	Golgi-associated vesicle membrane	0030660
Golgi apparatus	0005794	Golgi-associated vesicle	0005798
Golgi-associated vesicle membrane	0030660	cytoplasmic side of endoplasmic reticulum membrane	0098554
Golgi-associated vesicle membrane	0030660	endoplasmic reticulum membrane	0005789
Golgi-associated vesicle membrane	0030660	endoplasmic reticulum	0005783
Golgi-associated vesicle	0005798	cytoplasmic side of endoplasmic reticulum membrane	0098554
Golgi-associated vesicle	0005798	endoplasmic reticulum membrane	0005789
Golgi-associated vesicle	0005798	endoplasmic reticulum	0005783
trans-Golgi network membrane	0032588	Golgi-associated vesicle membrane	0030660
trans-Golgi network membrane	0032588	Golgi-associated vesicle	0005798
trans-Golgi network	0005802	Golgi-associated vesicle membrane	0030660
trans-Golgi network	0005802	Golgi-associated vesicle	0005798
Golgi-associated vesicle membrane	0030660	early endosome membrane	0031901
Golgi-associated vesicle membrane	0030660	early endosome	0005769
Golgi-associated vesicle	0005798	early endosome membrane	0031901
Golgi-associated vesicle	0005798	early endosome	0005769
plasma membrane	0005886	clathrin-coated endocytic vesicle membrane	0030669
plasma membrane	0005886	clathrin-coated endocytic vesicle	0045334

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GO name 1	GO ID	GO name 2	GO ID
cytoplasmic side of plasma membrane	0009898	clathrin-coated endocytic vesicle membrane	0030669
cytoplasmic side of plasma membrane	0009898	clathrin-coated endocytic vesicle	0045334
endocytic vesicle membrane	0030666	early endosome membrane	0031901
endocytic vesicle membrane	0030666	early endosome	0005769
endocytic vesicle	0030139	early endosome membrane	0031901
endocytic vesicle	0030139	early endosome	0005769
multivesicular body membrane	0032585	late endosome membrane	0031902
multivesicular body membrane	0032585	late endosome	0005770
multivesicular body	0005771	late endosome membrane	0031902
multivesicular body	0005771	late endosome	0005770
late endosome membrane	0031902	endolysosome membrane	0036020
late endosome membrane	0031902	endolysosome	0036019
late endosome	0005770	endolysosome membrane	0036020
late endosome	0005770	endolysosome	0036019
autophagosome membrane	0000421	lysosomal membrane	0005765
autophagosome membrane	0000421	lysosome	0005764
autophagosome	0005776	lysosomal membrane	0005765
autophagosome	0005776	lysosome	0005764
autophagosome membrane	0000421	late endosome membrane	0031902
autophagosome membrane	0000421	late endosome	0005770
autophagosome	0005776	late endosome membrane	0031902
autophagosome	0005776	late endosome	0005770
phagocytic vesicle membrane	0030670	lysosomal membrane	0005765
phagocytic vesicle membrane	0030670	lysosome	0005764
phagocytic vesicle	0045335	lysosomal membrane	0005765
phagocytic vesicle	0045335	lysosome	0005764
phagocytic vesicle membrane	0030670	azurophil granule membrane	0035577
phagocytic vesicle membrane	0030670	azurophil granule	0042582
phagocytic vesicle	0045335	azurophil granule membrane	0035577
phagocytic vesicle	0045335	azurophil granule	0042582
trans-Golgi network membrane	0032588	secretory granule membrane	0030667
trans-Golgi network membrane	0032588	secretory granule	0030141
trans-Golgi network	0005802	secretory granule membrane	0030667
trans-Golgi network	0005802	secretory granule	0030141
secretory granule membrane	0030667	cytoplasmic side of plasma membrane	0009898
secretory granule membrane	0030667	plasma membrane	0005886
secretory granule	0030141	cytoplasmic side of plasma membrane	0009898
secretory granule	0030141	plasma membrane	0005886
lamellar body membrane	0097232	cytoplasmic side of plasma membrane	0009898
lamellar body membrane	0097232	plasma membrane	0005886
lamellar body	0042599	cytoplasmic side of plasma membrane	0009898
lamellar body	0042599	plasma membrane	0005886
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202	cytoplasmic side of plasma membrane	0009898

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<b>GO name 1</b>	<b>GO ID</b>	<b>GO name 2</b>	<b>GO ID</b>
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0061202	plasma membrane	0005886
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted gamma-aminobutyric acid transport vesicle	0061200	plasma membrane	0005886
clathrin-sculpted acetylcholine transport vesicle membrane	0060201	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted acetylcholine transport vesicle membrane	0060201	plasma membrane	0005886
clathrin-sculpted acetylcholine transport vesicle	0060200	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted acetylcholine transport vesicle	0060200	plasma membrane	0005886
clathrin-sculpted glutamate transport vesicle membrane	0060203	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted glutamate transport vesicle membrane	0060203	plasma membrane	0005886
clathrin-sculpted glutamate transport vesicle	0060199	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted glutamate transport vesicle	0060199	plasma membrane	0005886
clathrin-sculpted monoamine transport vesicle membrane	0070083	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted monoamine transport vesicle membrane	0070083	plasma membrane	0005886
clathrin-sculpted monoamine transport vesicle	0070081	cytoplasmic side of plasma membrane	0009898
clathrin-sculpted monoamine transport vesicle	0070081	plasma membrane	0005886
melanosome membrane	0033162	cytoplasmic side of plasma membrane	0009898
melanosome membrane	0033162	plasma membrane	0005886
melanosome	0042470	cytoplasmic side of plasma membrane	0009898
melanosome	0042470	plasma membrane	0005886
synaptic vesicle membrane	0030672	cytoplasmic side of plasma membrane	0009898
synaptic vesicle membrane	0030672	plasma membrane	0005886
synaptic vesicle	0008021	cytoplasmic side of plasma membrane	0009898
synaptic vesicle	0008021	plasma membrane	0005886
synaptic vesicle membrane	0030672	early endosome membrane	0031901
synaptic vesicle membrane	0030672	early endosome	0005769
synaptic vesicle	0008021	early endosome membrane	0031901
synaptic vesicle	0008021	early endosome	0005769
multivesicular body membrane	0032585	cytoplasmic side of plasma membrane	0009898
multivesicular body membrane	0032585	plasma membrane	0005886
multivesicular body	0005771	cytoplasmic side of plasma membrane	0009898
multivesicular body	0005771	plasma membrane	0005886
platelet alpha granule membrane	0031092	cytoplasmic side of plasma membrane	0009898
platelet alpha granule membrane	0031092	plasma membrane	0005886
platelet alpha granule	0031091	cytoplasmic side of plasma membrane	0009898
platelet alpha granule	0031091	plasma membrane	0005886
platelet dense granule membrane	0031088	cytoplasmic side of plasma membrane	0009898
platelet dense granule membrane	0031088	plasma membrane	0005886
platelet dense granule	0042827	cytoplasmic side of plasma membrane	0009898
platelet dense granule	0042827	plasma membrane	0005886
lysosomal membrane	0005765	cytoplasmic side of plasma membrane	0009898
lysosomal membrane	0005765	plasma membrane	0005886
lysosome	0005764	cytoplasmic side of plasma membrane	0009898
lysosome	0005764	plasma membrane	0005886

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<b>GO name 1</b>	<b>GO ID</b>	<b>GO name 2</b>	<b>GO ID</b>
cytoplasmic side of endoplasmic reticulum membrane	0098554	lipid particle	0005811
endoplasmic reticulum membrane	0005789	lipid particle	0005811
endoplasmic reticulum	0005783	lipid particle	0005811

TABLE 5. List of compartments in the general CPKG.

GO name	GO ID
ER to Golgi transport vesicle	0000139
ER to Golgi transport vesicle membrane	0000421
Golgi lumen	0000775
Golgi membrane	0001891
Golgi-associated vesicle membrane	0005576
autophagosome membrane	0005635
azurophil granule lumen	0005654
cell junction	0005694
chromosome	0005737
chromosome, centromeric region	0005741
ciliary base	0005743
ciliary membrane	0005758
ciliary tip	0005759
clathrin-coated endocytic vesicle	0005765
clathrin-coated endocytic vesicle membrane	0005768
clathrin-sculpted acetylcholine transport vesicle lumen	0005769
clathrin-sculpted acetylcholine transport vesicle membrane	0005778
clathrin-sculpted gamma-aminobutyric acid transport vesicle lumen	0005782
clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane	0005788
clathrin-sculpted glutamate transport vesicle lumen	0005789
clathrin-sculpted glutamate transport vesicle membrane	0005793
clathrin-sculpted monoamine transport vesicle lumen	0005796
clathrin-sculpted monoamine transport vesicle membrane	0005811
cytoplasm	0005829
cytoplasmic side of endoplasmic reticulum membrane	0005886
cytoplasmic side of plasma membrane	0008021
cytoplasmic vesicle membrane	0009897
cytosol	0009898
early endosome	0010008
early endosome lumen	0012507
early endosome membrane	0030054
endocytic vesicle membrane	0030133
endolysosome lumen	0030134
endolysosome membrane	0030658
endoplasmic reticulum lumen	0030659
endoplasmic reticulum membrane	0030660
endoplasmic reticulum quality control compartment	0030666
endoplasmic reticulum-Golgi intermediate compartment	0030667
endoplasmic reticulum-Golgi intermediate compartment membrane	0030669
endosome	0030670
endosome lumen	0030672
endosome membrane	0031088
external side of plasma membrane	0031089
extracellular exosome	0031092
extracellular region	0031093
host cell cytosol	0031095
integral component of cytoplasmic side of endoplasmic reticulum membrane	0031096
integral component of luminal side of endoplasmic reticulum membrane	0031901
lamellar body	0031902
lamellar body membrane	0031904
late endosome lumen	0031905
late endosome membrane	0031906
lipid particle	0032010
lysosomal lumen	0032588
lysosomal membrane	0033017
melanosome lumen	0033018
melanosome membrane	0033116
mitochondrial inner membrane	0033162
mitochondrial intermembrane space	0034045
mitochondrial matrix	0034493

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<b>GO name</b>	<b>GO ID</b>
mitochondrial outer membrane	0034774
multivesicular body lumen	0035578
nuclear envelope	0036020
nucleoplasm	0036021
peroxisomal matrix	0036126
peroxisomal membrane	0042599
phagocytic cup	0042622
phagocytic vesicle	0043202
phagocytic vesicle lumen	0044164
phagocytic vesicle membrane	0044322
phagolysosome	0045334
photoreceptor disc membrane	0045335
photoreceptor inner segment membrane	0060170
photoreceptor outer segment membrane	0060201
plasma membrane	0060202
platelet alpha granule lumen	0060203
platelet alpha granule membrane	0060204
platelet dense granule lumen	0060342
platelet dense granule membrane	0061201
platelet dense tubular network lumen	0061202
platelet dense tubular network membrane	0070062
pre-autophagosomal structure membrane	0070082
primary cilium	0070083
sarcoplasmic reticulum lumen	0071458
sarcoplasmic reticulum membrane	0071556
secretory granule lumen	0072372
secretory granule membrane	0097013
sperm flagellum	0097232
synaptic vesicle	0097381
synaptic vesicle membrane	0097486
trans-Golgi network membrane	0097542
transport vesicle	0097546
transport vesicle membrane	0098554

TABLE 6. List of compartments removed from the general CPKG.

<b>GO name</b>	<b>GO ID</b>
azurophil granule lumen	0035578
azurophil granule membrane	0035577
lamellar body	0042599
lamellar body membrane	0097232
melanosome lumen	0034493
melanosome membrane	0033162
phagocytic cup	0001891
phagocytic vesicle	0045335
phagocytic vesicle lumen	0097013
phagocytic vesicle membrane	0030670
phagolysosome	0032010
photoreceptor disc membrane	0097381
photoreceptor inner segment membrane	0060342
photoreceptor outer segment membrane	0042622
platelet alpha granule lumen	0031093
platelet alpha granule membrane	0031092
platelet dense granule lumen	0031089
platelet dense granule membrane	0031088
platelet dense tubular network lumen	0031096
platelet dense tubular network membrane	0031095
sarcoplasmic reticulum lumen	0033018
sarcoplasmic reticulum membrane	0033017
sperm flagellum	0036126