

The following tables present results from testing differences between WT and knockout mouse models. N = number of experiments performed for each condition, while no. of points = number of individual experiments.

### Knockout mice

#### A. Vacuolar pH

N	Control	No. of points	Control median (SFR/pH)		Knockout	No. of points	Knockout median (SFR/pH)		p value
1	WT	394	0.88	7.4	CIC4	350	0.90	7.5	0.060
1	WT	512	1.07	7.9	CIC7	183	1.04	7.8	0.029
3	WT	371	1.04	7.8	KCNQ1	311	1.13	8.0	0.013
1	WT	98	0.92	7.5	KCNE3	206	0.72	6.7	5.0E-5
1	WT	410	1.00	7.7	TRPA1/V1	412	1.00	7.7	4.0E-4
1	WT	399	0.86	7.3	TRPV2	298	0.89	7.4	1.0E-6
1	HVCN1	141	1.88	9.0	HVCN1/KCNQ1	63	1.63	8.7	2.0E-5

#### B. Vacuolar area

N	Control	No. of points	Control median	Knockout	No. of points	Knockout median	p value
1	WT	186	10.71	CIC4	200	10.40	0.064
1	WT	112	13.23	CIC7	30	13.71	0.421
3	WT	162	11.66	KCNQ1	189	11.34	0.943
1	WT	34	10.16	KCNE3	79	10.56	0.117
1	WT	79	11.66	TRPA1/V1	119	12.29	0.48
1	WT	174	12.37	TRPV2	178	12.92	0.047
1	HVCN1	78	17.09	HVCN1/KCNQ1	16	16.31	0.648