

**Supplementary Table 1. Genes selectively expressed in POA<sup>PACAP/BDNF</sup> neurons.** Related to Figure 1 TRAP RNA-Seq results.

Enrichment values show mean ratio between RPKM values of IP and input fraction across 2 experiments

Genes with log2Enrichment>1 in all 4 TRAP experiments are shown.

Neuropeptides highlighted in Figure 1L are shown in blue

Gene Name	Log2 Enrichment (PACAP-GFPL10a)	Log2 Enrichment (BDNF-GFPL10a)
Ucn3	4.22	3.47
Gng8	3.76	3.33
Nme4	3.36	2.78
Nxph4	3.98	2.00
Adcyap1	2.86	2.93
Ghrh	2.84	2.52
Samd3	2.57	2.61
Emx2	2.51	2.54
Efcab10	2.77	2.20
Bdnf	2.91	2.01
Pcdhgb4	1.91	2.96
Rspo3	1.80	2.68
Nrn1	2.18	2.12
Fezf1	1.86	2.43
Gm10094	2.32	1.90
Tm4sf5	2.23	1.95
C1ql1	1.87	2.27
Brs3	2.58	1.40
Gm35595	2.19	1.75
Nhlh2	2.05	1.88
D330045A20Rik	2.03	1.84
Cstad	2.19	1.60
Cbln2	2.20	1.55
Gm5617	2.40	1.20
Hopx	2.01	1.56
Pcbd1	1.74	1.71
Fam19a1	1.76	1.61
Trh	1.39	1.96
Insm2	1.81	1.51
Crip2	1.94	1.37
Cetn2	1.84	1.43
A230065H16Rik	1.64	1.62
Gmip	1.80	1.46
Slc17a6	1.57	1.67

Rps271	1.50	1.73
Fam183b	1.55	1.63
Mrpl54	1.56	1.45
Sncg	1.36	1.64
Adamts2	1.49	1.45
Resp18	1.52	1.35
Gpx3	1.39	1.44
Mrpl34	1.24	1.37
Creb3l1	1.20	1.30
Klhdc8b	1.33	1.16