

## Legends to Supplementary Figures

### Supplemental Figure 1

Validation of reporter expression via immunocytochemistry. 24h post-sort immunocytochemistry and cell counts for the respective cell line protein and reporter co-localization in *Nurr1* (**A-D**), and *Pitx3* (**E-H**). (**I-K**), BAC FISH showing single genomic integration sites (red arrow) for the *Hes5::GFP* (**I**), *Nurr1::GFP* (**J**), and *Pitx3::YFP* (**K**) lines. 24h post-sort immunocytochemistry for *Lmx1a*, GFP and TH in *Hes5::GFP* (**L**), *Nurr1::GFP* (**M**), and *Pitx3::YFP* (**N**) lines. Scale bar = 50 $\mu$ m.

### Supplemental Figure 2

Immunohistochemical analysis of tumors after grafting. (**A**) H&E staining of tumors 6 weeks post grafting. (**B** and **C**) Example of a *Nurr1* line grafted mouse that generated a tumor in the cortex. (**B**) Immunostaining for GFAP, TH, and GFP. (**C**) immunostaining for SSEA1, GFP, and DAPI. (**D** and **E**) Immunostaining for pluripotent and germ layer markers in SSEA1 grafted mice after two weeks *in vivo*. (**D**) Oct4, collagen (endoderm), and DAPI. (**E**) Pax6 (ectoderm),  $\beta$ -catenin (mesoderm), and DAPI. Scale bar = 250 $\mu$ m in **A**, and 50 $\mu$ m in **B-E**.

### Supplemental Figure 3

FACS and flow cytometry analyses of reporter lines. (**A-C**) *Hes5::GFP* line FACS and flow analysis plotted for GFP and SSEA1 expression. (**A**) FACS sort after 14 days of differentiation. (**B**) Post-sort analysis of GFP<sup>+</sup> sorted cells from **A**. (**C**) Re-plating 24h before sorting (day 13) reduces the number of SSEA1<sup>+</sup> cells with a slight decrease in the number of *Hes5::GFP*<sup>+</sup>. (**D-F**) *Nurr1::GFP* FACS and flow cytometry analyses plotted for GFP and SSEA1-647 expression. (**D**) FACS sort after 14 days of differentiation. (**E**) Concurrent culture sorted at day 20 of differentiation increases the percentage of GFP<sup>+</sup> and decreases the percentage of SSEA1<sup>+</sup> cells. (**F**) Re-plating at day 13 and sorting one week later enhances this effect.

#### **Supplemental Figure 4**

Immunohistochemical analysis of astrocytes in grafts. **(A)** GFP+/GFAP+ cells are only found within the grafts of the *Hes5::GFP* line. **(B)** GFAP+ cells from the host are incorporated into regions of TH+ cells in all three lines. **(C)** 50,000 GFP+/RFP+ cells from the *Nurr1::GFP;Ubc::RFP* and *Hes5::GFP;Ubc::RFP* lines were grafted into hemiparkinsonian mice and confocal z-stack analysis was performed after 5 weeks. Note: Reporter expression in grafts post fixation and processing could not be observed without antibodies, thereby allowing GFAP to be placed in the green channel. Scale bar = 50 $\mu$ m in **A** and the lower panels of **B**, 250 $\mu$ m in the top panels of **B**, 100 $\mu$ m in the two left panels in **C**, and 25  $\mu$ m in the far right panel.

#### **Supplemental Figure 5**

Immunohistochemical analysis of post-mitotic VTA and SN dopaminergic neuron subtypes in grafts. [Expression of Pitx3 in \*Nurr1::GFP\* \(A\) and \*Pitx3::YFP\* \(B\) grafted mice.](#) Nurr1 **(C)** and Pitx3 **(D)** cell line grafted mice stained for Girk2, GFP, and Calbindin. **(E and F)** Ki67 expression found in the SVZ (arrows) but absent in *Nurr1::GFP* graft, indicating an absence of cycling cells. Scale bar = 50 $\mu$ m in **A-C**, **D**, and **F**, and 250 $\mu$ m in **E**.

#### **Supplemental Figure 6**

Additional behavioral analyses post-transplantation. **(A)** Percentage of amphetamine-induced ipsilateral rotational recovery in all three lines in both single- and double-sorted grafts compared to sham- (vehicle) grafted controls. **(B)** Percentage of apomorphine-induced contralateral rotational recovery in all three lines in both single- and double-sorted grafts. **c**, Percentage of ipsilateral paw placement in cylinder test of mice grafted with three lines in both single and double-sorted grafts. \*\*\* = p-value  $\leq$  0.001.

#### **Supplemental Figure 7**

Confirmation of novel gene expression from microarray analysis. **(A)** qRT-PCR expression levels of Pbx1 and Uncx4.1 mRNA in the three cell lines using four separate sorts (two from the microarray analysis and two used only for qRT-PCR). **(B)** Immunohistochemistry for TH, DAPI

and *Necab1* in the adult SN. *Necab1* expression co-localized in a subset of TH<sup>+</sup> cells in the dorsal VTA and dorsal SN. (C) *C1ql1* expression co-localized with TH<sup>+</sup> neurons in the adult SN. (D) E.10.5 coronal immunohistochemical staining for FoxA2 and Pbx1. Scale bar = 200μm in B and C, and 40μm in D.

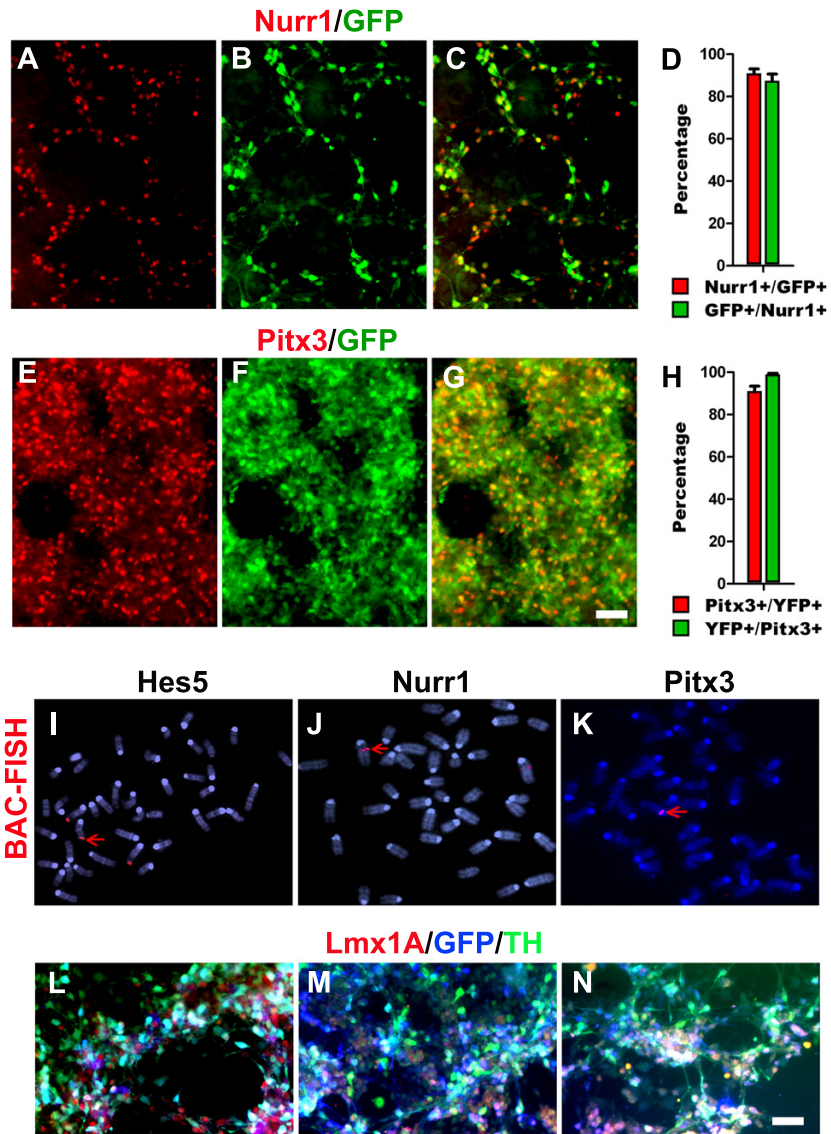
### Supplemental Figure 8

*In vivo* data on the expression of *Uncx4.1* and *Pbx1* in the human fetal ventral midbrain (6-8 weeks post conception). (A) Left panel: Schematic illustration of the region analyzed. Right panel: Immunohistochemistry for *Uncx4.1* showing perinuclear staining limited to the midbrain dopamine neuron anlage. (B) Left panel: Schematic illustration of the region analyzed. Right panel: Immunohistochemistry for *Pbx1* showing nuclear expression within a broad ventral midbrain domain. Scale bar = 100μm in top panels and 25μm in bottom panels.

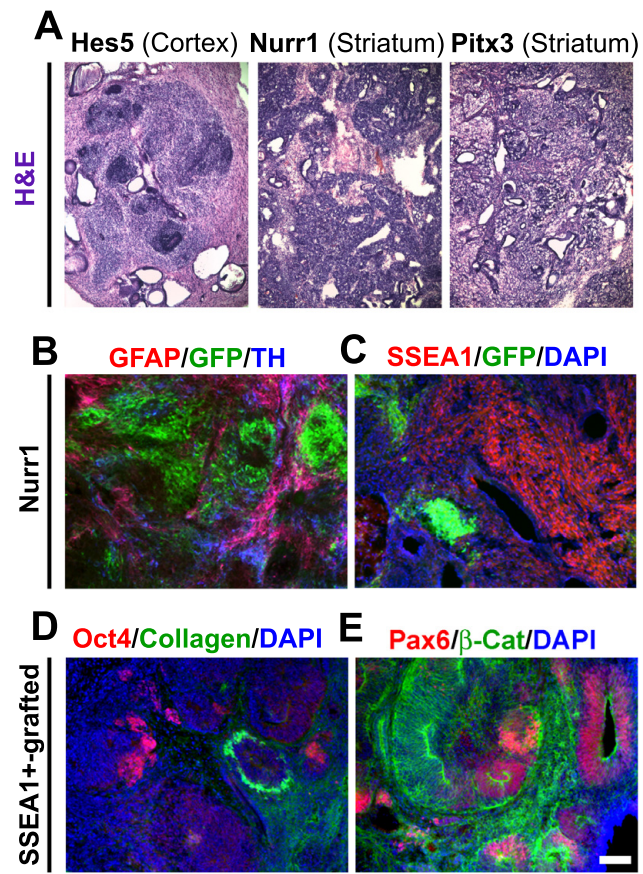
### Supplemental Figure 9

*In vivo* confirmation of cell surface markers discovered through SSRLA. (A) In situ hybridization of *Chrna6* in an E14.5 embryo [euxassay\_002965, section 12; <http://www.eurexpress.org>] (B) *Chrna6* in situ hybridization in the E15.5 midbrain and adult SN (C) [Allen Brain Atlas Resources. Seattle, WA. Allen Institute for Brain Science. ©2012. Available from: <http://www.brain-map.org>]. (D) *Chrna6::GFP* BAC transgenic reporter mouse expression in the P7 midbrain [The Gene Expression Nervous System Atlas (GENSAT) Project, NINDS Contracts N01NS02331 & HHSN271200723701C to The Rockefeller University (New York, NY)]. (E) Immunohistochemistry for *Chrn3* in the *Lmx1A*<sup>+</sup>/*FoxA2*<sup>+</sup> ventral midbrain domain of a human fetus at 6-8 weeks post conception. Scale bar = 100μm in top panels and 25μm in bottom panels.

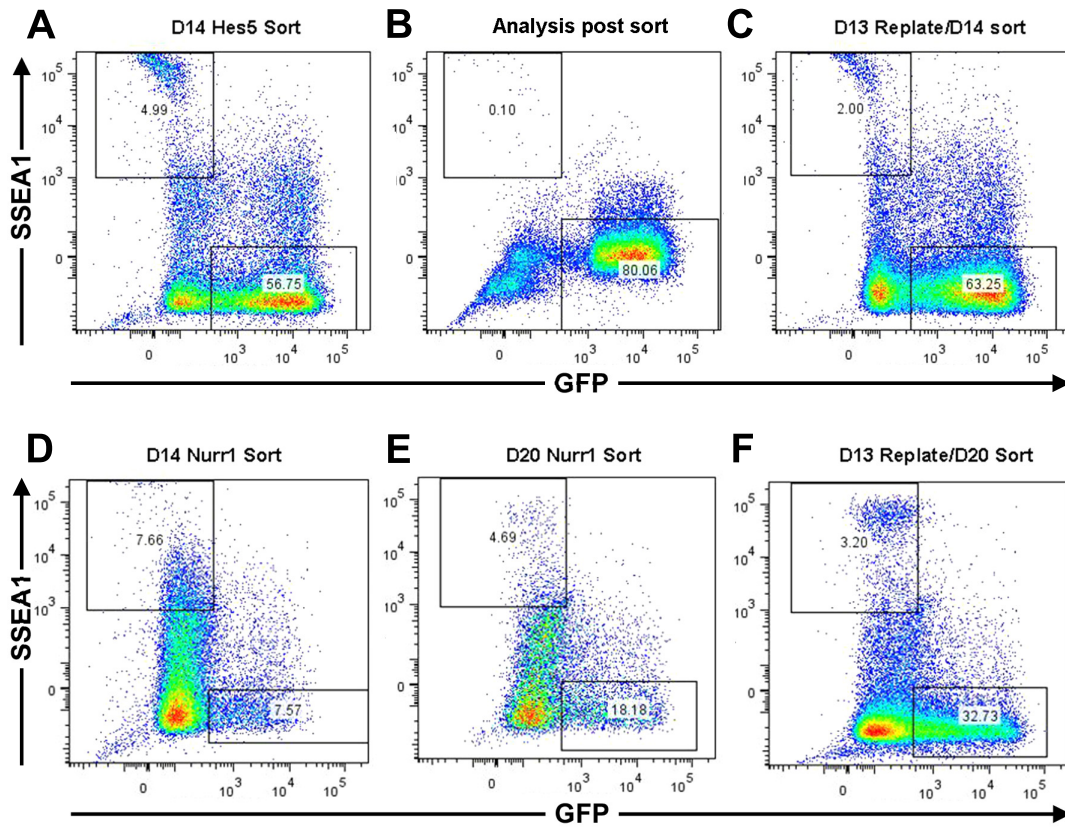
Supplemental Figure 1 (Ganat et al.,)



Supplemental Figure 2 (Ganat et al.,)

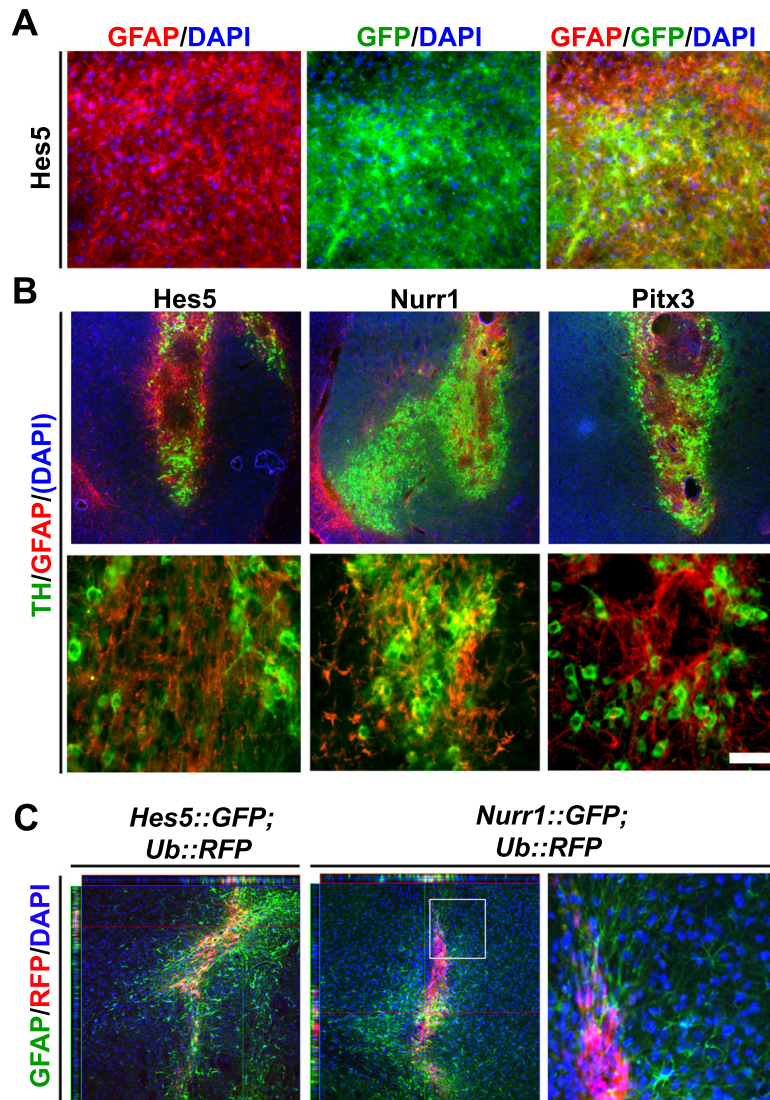


Supplemental Figure 3 (Ganat et al.,)

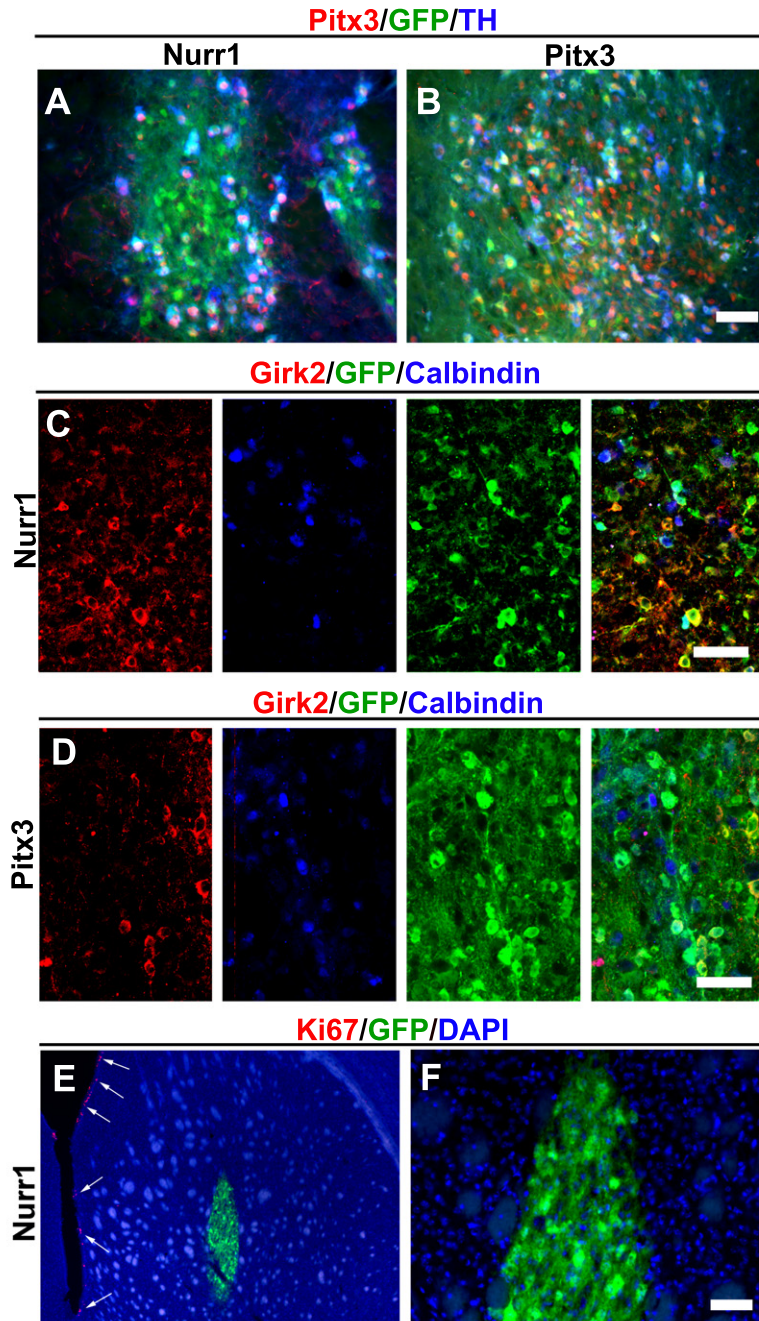




Supplemental Figure 4 (Ganat et al.,)

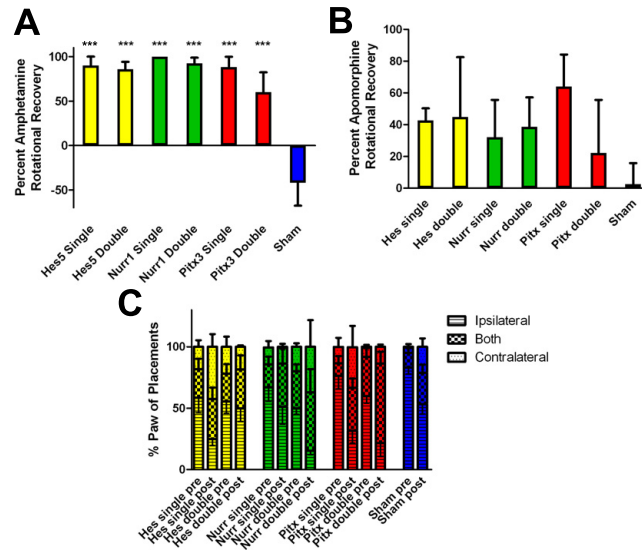


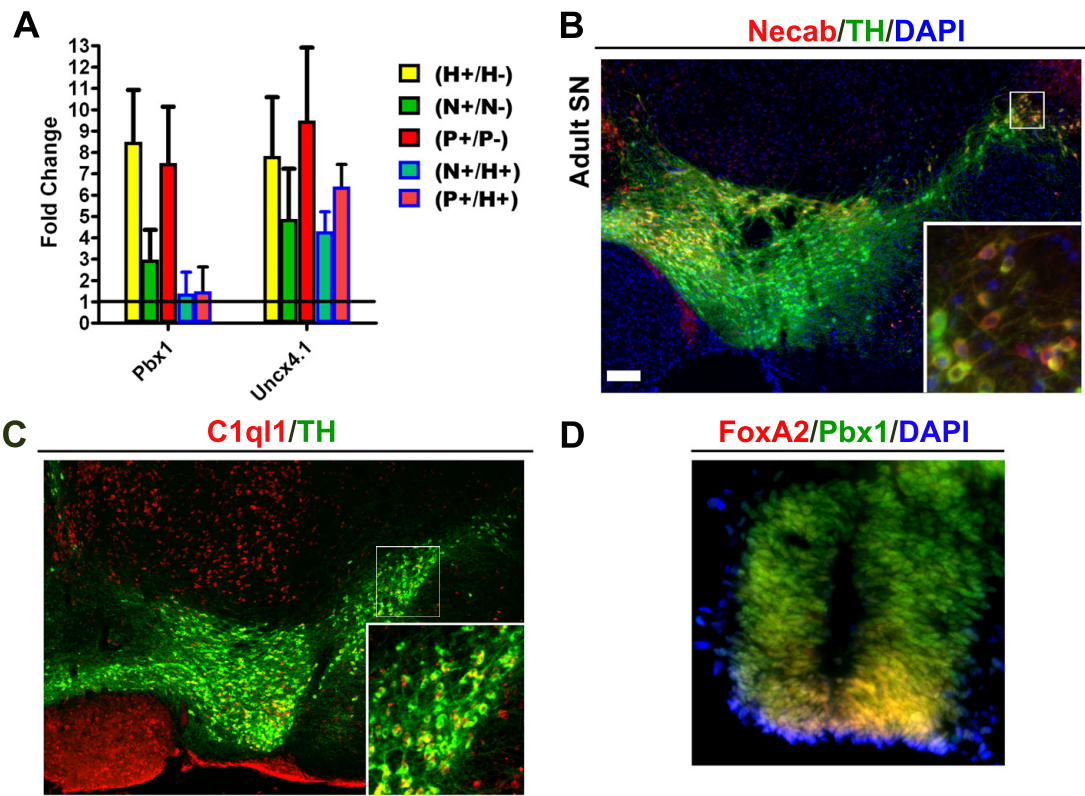
Supplemental Figure 5 (Ganat et al.,)



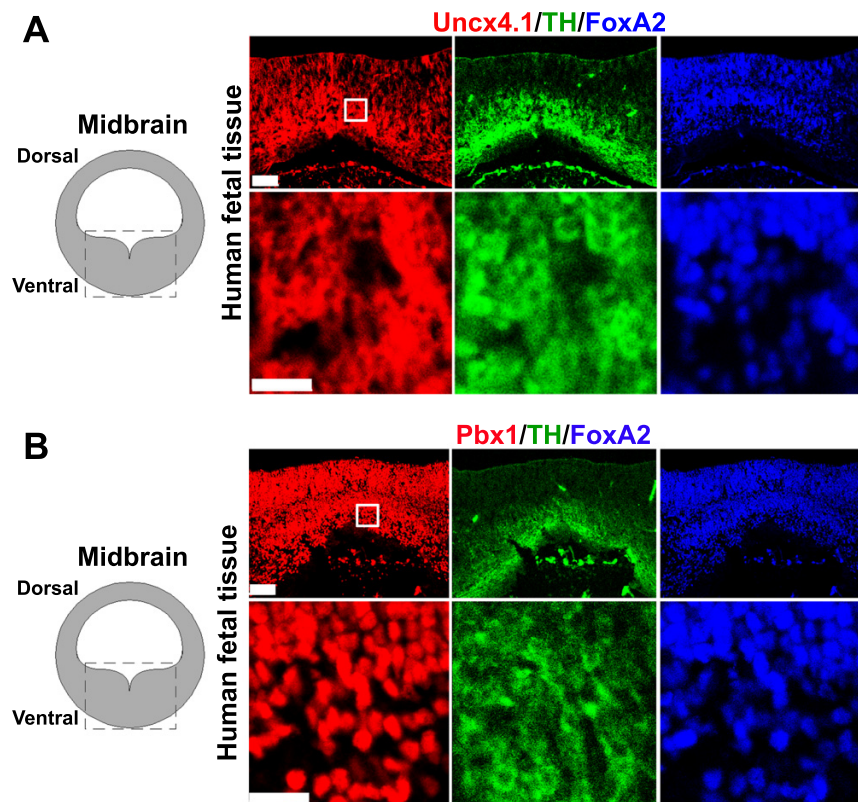


Supplemental Figure 6 (Ganat et al.,)

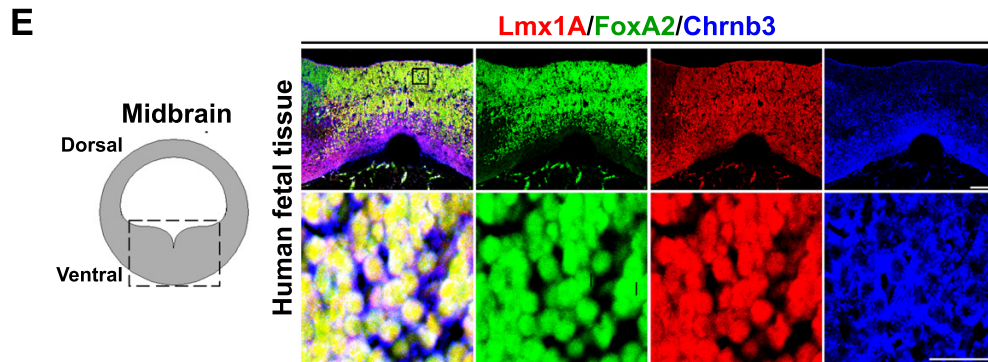
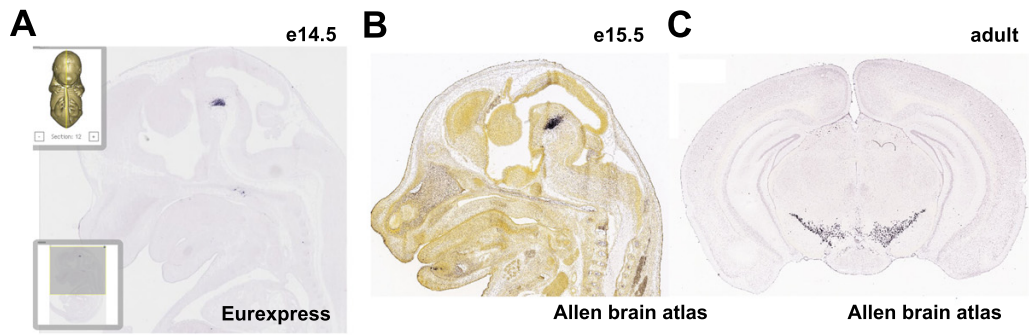




Supplemental Figure 8 (Ganat et al.,)



Supplemental Figure 9 (Ganat et al.,)



Supplemental Table 1  
Core 85 genes

Column ID	p-value (N+P+ vs. H+)	Fold-Change (N+P+ vs. H+)	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
TH	0.0014	21.53	0.0065	16.77	0.0022	27.64	0.0314	8.10	0.0028	25.05
SCL0001243.1_522 (RET)	0.0004	12.37	0.0061	7.30	0.0003	20.97	0.0129	5.72	0.0006	16.13
EFCBP1 (Necab1)	0.0001	10.34	0.0001	11.84	0.0004	9.03	0.0027	5.49	0.0005	8.57
RET	0.0002	8.30	0.0048	5.04	0.0001	13.66	0.0098	4.22	0.0002	12.15
NR4A2	0.0019	7.19	0.0048	7.28	0.0052	7.10	0.0076	6.30	0.0013	11.13
PITX3	0.0014	6.99	0.0145	4.71	0.0010	10.38	0.0164	4.53	0.0005	12.69
SLC17A6	0.0014	6.72	0.0024	7.70	0.0060	5.87	0.0052	6.12	0.0010	9.97
MARCH4.	0.0004	6.68	0.0059	4.55	0.0003	9.81	0.0026	5.57	0.0003	9.86
LOC381270 (MARCH4)	0.0012	5.75	0.0102	4.32	0.0012	7.67	0.0021	6.56	0.0005	9.59
RBM11	0.0001	5.41	0.0006	4.77	0.0002	6.14	0.0049	3.24	0.0021	3.80
MYRIP	0.0005	5.25	0.0014	5.24	0.0014	5.25	0.0006	6.49	0.0004	7.14
EBF3	0.0004	4.70	0.0014	4.71	0.0014	4.69	0.0011	4.91	0.0001	9.10
C1QL1	0.0000	4.69	0.0001	5.30	0.0003	4.14	0.0005	3.85	0.0002	4.35
5330430C04RIK	0.0003	4.67	0.0007	5.07	0.0015	4.30	0.0057	3.32	0.0133	2.82
NRN1	0.0012	4.57	0.0029	4.71	0.0037	4.44	0.0072	3.83	0.0003	7.75
SLC35D3	0.0003	4.40	0.0018	3.88	0.0005	4.98	0.0084	2.93	0.0004	5.27
PGBD5	0.0001	4.27	0.0004	3.97	0.0002	4.58	0.0003	4.19	0.0001	4.81
CHL1	0.0041	4.09	0.0198	3.44	0.0049	4.86	0.0377	2.93	0.0229	3.32
PBX1	0.0003	3.94	0.0016	3.55	0.0005	4.39	0.0213	2.28	0.0012	3.71
UNCX4.1	0.0008	3.91	0.0006	5.24	0.0108	2.92	0.0017	4.19	0.0006	5.20
3110018A08RIK (EBF3)	0.0019	3.87	0.0048	3.91	0.0052	3.84	0.0039	4.10	0.0003	7.39
RGS9	0.0031	3.86	0.0175	3.20	0.0034	4.65	0.0343	2.74	0.0211	3.07
STMN4	0.0058	3.82	0.0252	3.26	0.0070	4.48	0.0390	2.92	0.0378	2.94
CHST8	0.0005	3.79	0.0006	4.59	0.0045	3.12	0.0006	4.52	0.0003	5.31
CACNA2D3	0.0039	3.61	0.0326	2.74	0.0028	4.77	0.0247	2.92	0.0072	3.85
TES	0.0007	3.56	0.0035	3.27	0.0013	3.88	0.0355	2.17	0.0073	2.87
LOC328644	0.0006	3.52	0.0045	3.02	0.0008	4.10	0.0025	3.34	0.0027	3.30
DNAJC6	0.0050	3.49	0.0187	3.14	0.0074	3.88	0.0083	3.78	0.0074	3.87
MGC106740	0.0002	3.49	0.0021	2.90	0.0002	4.21	0.0124	2.23	0.0175	2.12
2310056B04RIK (PBX1)	0.0002	3.48	0.0017	2.95	0.0002	4.10	0.0026	2.77	0.0002	4.31
GALNT9	0.0001	3.47	0.0005	3.21	0.0002	3.75	0.0012	2.85	0.0001	3.95
SCN3B	0.0022	3.44	0.0140	2.87	0.0023	4.11	0.0294	2.48	0.0064	3.35
A230070D14RIK (CELF4)	0.0024	3.43	0.0074	3.32	0.0053	3.55	0.0029	4.00	0.0124	2.99
1700028M03RIK	0.0016	3.41	0.0015	4.17	0.0126	2.79	0.0042	3.44	0.0042	3.44
FOXP2	0.0025	3.37	0.0079	3.22	0.0051	3.52	0.0254	2.56	0.0041	3.67
9830143E02RIK	0.0045	3.20	0.0072	3.48	0.0159	2.95	0.0275	2.63	0.0141	3.02
A930017M01RIK (GM305)	0.0034	3.16	0.0041	3.63	0.0170	2.75	0.0060	3.37	0.0423	2.29
SCL00272790.1_298	0.0010	3.09	0.0049	2.82	0.0016	3.40	0.0159	2.32	0.0092	2.54
2900075A18RIK (CAMK2N2)	0.0080	3.08	0.0279	2.78	0.0111	3.41	0.0105	3.46	0.0220	2.94
GUCY2C	0.0001	3.03	0.0015	2.54	0.0001	3.61	0.0026	2.37	0.0001	3.84
A730098N08RIK	0.0003	2.99	0.0011	2.92	0.0008	3.06	0.0008	3.06	0.0001	4.10
BRUNOL4	0.0034	2.96	0.0062	3.12	0.0111	2.81	0.0021	3.82	0.0115	2.79
SCHIP1	0.0002	2.94	0.0005	2.98	0.0006	2.90	0.0004	3.11	0.0003	3.19
SGPP2	0.0033	2.94	0.0119	2.75	0.0057	3.14	0.0101	2.83	0.0014	4.08
D130050A01RIK	0.0033	2.94	0.0055	3.15	0.0119	2.74	0.0036	3.42	0.0293	2.32
PDZRN3	0.0000	2.90	0.0002	2.91	0.0002	2.90	0.0000	3.54	0.0000	4.75
D10BWG1379E	0.0006	2.86	0.0011	3.05	0.0028	2.68	0.0016	2.92	0.0061	2.40
CHRN4	0.0005	2.84	0.0007	3.19	0.0036	2.53	0.0008	3.13	0.0006	3.27
B230208J24RIK (ZBTB7C)	0.0020	2.73	0.0157	2.30	0.0018	3.25	0.0222	2.18	0.0029	3.01
SERPINI1	0.0035	2.67	0.0073	2.75	0.0101	2.60	0.0015	3.62	0.0032	3.16
CACNA2D1	0.0045	2.64	0.0031	3.29	0.0374	2.12	0.0103	2.66	0.0371	2.13
ELMO1	0.0004	2.56	0.0006	2.80	0.0026	2.34	0.0005	2.90	0.0003	3.05
UTS2R	0.0002	2.54	0.0008	2.44	0.0004	2.64	0.0005	2.60	0.0002	2.91
SCN3A	0.0015	2.53	0.0068	2.36	0.0025	2.72	0.0068	2.36	0.0076	2.32
STK32B	0.0093	2.46	0.0191	2.48	0.0210	2.43	0.0093	2.82	0.0131	2.65
9630025O15RIK	0.0066	2.45	0.0227	2.28	0.0098	2.63	0.0098	2.63	0.0014	3.67
SCL000121.1_106 (PKCβ similar)	0.0185	2.45	0.0379	2.42	0.0346	2.47	0.0061	3.53	0.0325	2.50
GABRB3	0.0078	2.43	0.0096	2.70	0.0311	2.20	0.0133	2.55	0.0425	2.08
6230400G14RIK (PRICKLE2)	0.0015	2.43	0.0035	2.49	0.0050	2.37	0.0051	2.36	0.0098	2.16
C230081G24RIK	0.0009	2.42	0.0051	2.23	0.0014	2.64	0.0050	2.23	0.0016	2.58
RPS6KL1	0.0026	2.42	0.0058	2.47	0.0077	2.37	0.0037	2.64	0.0245	2.00
PFTK1	0.0012	2.41	0.0034	2.40	0.0032	2.43	0.0050	2.28	0.0004	3.18
CHGA	0.0070	2.40	0.0109	2.56	0.0228	2.26	0.0013	3.67	0.0391	2.06
SPIRE2	0.0094	2.38	0.0432	2.08	0.0094	2.72	0.0112	2.64	0.0254	2.29
LMO3	0.0029	2.30	0.0202	2.00	0.0027	2.64	0.0068	2.32	0.0002	3.91
OPN3	0.0005	2.25	0.0031	2.10	0.0009	2.41	0.0020	2.20	0.0001	3.00
KCNG4	0.0032	2.08	0.0089	2.05	0.0070	2.11	0.0097	2.03	0.0054	2.18
HMGB2	0.0093	-2.49	0.0470	-2.12	0.0085	-2.91	0.0392	-2.20	0.0180	-2.54
SOX2	0.0006	-3.23	0.0113	-2.39	0.0003	-4.38	0.0210	-2.17	0.0024	-3.05
CDC25C	0.0015	-3.34	0.0102	-2.83	0.0017	-3.94	0.0470	-2.13	0.0324	-2.29
SOX21	0.0008	-3.40	0.0192	-2.35	0.0003	-4.91	0.0487	-2.00	0.0023	-3.38
A830059I20RIK (FAM181b)	0.0004	-3.40	0.0013	-3.42	0.0014	-3.39	0.0163	-2.27	0.0013	-3.40
CDCA8	0.0082	-3.42	0.0440	-2.75	0.0073	-4.26	0.0468	-2.71	0.0475	-2.70
NOTCH1	0.0004	-3.51	0.0099	-2.50	0.0002	-4.94	0.0369	-2.02	0.0020	-3.25
PDLIM3	0.0000	-3.82	0.0000	-4.42	0.0001	-3.29	0.0028	-2.26	0.0009	-2.58
DLL1	0.0002	-3.82	0.0022	-3.15	0.0002	-4.62	0.0064	-2.64	0.0255	-2.12
ASCL1	0.0001	-3.84	0.0017	-2.93	0.0001	-5.04	0.0114	-2.22	0.0043	-2.56
GATA2	0.0044	-4.97	0.0078	-5.40	0.0139	-4.58	0.0300	-3.67	0.0030	-7.09
EGFP	0.0004	-5.71	0.0054	-4.01	0.0003	-8.15	0.0001	10.64	0.0000	16.47
HES5	0.0004	-6.13	0.0011	-6.43	0.0016	-5.85	0.0092	-3.86	0.0021	-5.45
NRARP	0.0002	-6.18	0.0006	-5.97	0.0005	-6.40	0.0225	-2.77	0.0012	-5.16
GAD1	0.0001	-6.40	0.0001	-7.60	0.0005	-5.40	0.0385	-2.28	0.0019	-4.06
NKX2-2	0.0000	-6.53	0.0001	-6.34	0.0001	-6.72	0.0087	-2.69	0.0002	-5.27
WNT7B	0.0000	-7.72	0.0001	-5.28	0.0000	-11.28	0.0222	-2.20	0.0010	-3.69
FGFBP3	0.0000	-11.68	0.0001	-8.59	0.0000	-15.88	0.0460	-2.35	0.0005	-6.16



Supplemental Table 2

Intraline H+/H-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
EGFP	0.0000	14.67	0.0001	10.64	0.0000	16.47
SERPINA3N	0.0182	8.12				
HES5	0.0070	4.12	0.0092	-3.86	0.0021	-5.45
MMD2	0.0116	3.82				
EBF2	0.0059	3.68	0.0134	3.10	0.0028	4.30
LOC327816	0.0000	3.67				
LHX1	0.0011	3.40	0.0059	2.61	0.0494	1.87
WNT7B	0.0016	3.38	0.0222	-2.20	0.0010	-3.69
VIAAT	0.0261	3.35			0.0081	-4.51
WNT7A	0.0134	3.28			0.0138	-3.26
IGFBPL1	0.0140	3.26				
FGFBP3	0.0108	3.18	0.0460	-2.35	0.0005	-6.16
RFTN2	0.0150	3.15				
SOX14	0.0484	2.97				
IRX5	0.0182	2.88				
BCAN	0.0343	2.86				
6330404F12RIK	0.0186	2.85			0.0074	-3.45
IRX3	0.0091	2.80				
EPHB1	0.0095	2.79			0.0446	-2.11
G630034H08RIK	0.0158	2.77				
3222401M22RIK	0.0141	2.77				
NRARP	0.0236	2.75	0.0225	-2.77	0.0012	-5.16
GAD1	0.0168	2.68	0.0385	-2.28	0.0019	-4.06
ST18	0.0102	2.64	0.0181	2.39		
IGSF11	0.0207	2.63				
DLX2	0.0479	2.62			0.0445	-2.67
MYT1	0.0034	2.58	0.0319	1.88	0.0167	2.06
ACAS2L	0.0383	2.56			0.0046	-4.07
3110018A08RIK	0.0355	2.55	0.0039	4.10	0.0003	7.39
IDB4	0.0356	2.54			0.0010	-5.52
EBF3	0.0337	2.45	0.0011	4.91	0.0001	9.10
ATP1A2	0.0153	2.45			0.0020	-3.47

Supplemental Table 2

Intraline H+/H-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
RHBDL4	0.0071	2.44			0.0466	-1.84
2610017I09RIK	0.0153	2.43			0.0056	-2.88
BC024139	0.0088	2.42			0.0101	-2.37
6530413N01RIK	0.0166	2.41	0.0234	2.27	0.0174	2.39
ROBO3	0.0347	2.39				
TTYH1	0.0190	2.38			0.0202	-2.36
A730032D07RIK	0.0016	2.38	0.0192	1.78		
ASCL1	0.0072	2.38	0.0114	-2.22	0.0043	-2.56
NRXN3	0.0366	2.35			0.0154	2.79
MFNG	0.0299	2.35				
SOX9	0.0446	2.31			0.0009	-5.15
C230098O21RIK	0.0022	2.31			0.0422	1.64
SALL3	0.0464	2.31			0.0056	-3.56
BHLHB5	0.0041	2.30				
DLL1	0.0161	2.28	0.0064	-2.64	0.0255	-2.12
ADCY8	0.0379	2.28				
4933436C20RIK	0.0186	2.26				
NTRK2	0.0241	2.24				
E030049G20RIK	0.0080	2.24				
2810012G08RIK	0.0204	2.22				
B230345P09RIK	0.0250	2.22				
B230399E16RIK	0.0393	2.21				
IGFBPL	0.0120	2.21				
IRX2	0.0403	2.19			0.0475	-2.12
POU6F1	0.0128	2.19				
NKX6-2	0.0129	2.16			0.0100	-2.24
CHST3	0.0475	2.15			0.0036	-3.50
MT3	0.0297	2.15			0.0039	-3.02
TCF12	0.0241	2.11				
GSH1	0.0358	2.11				
LOC329698	0.0426	2.10				
C130092E12	0.0045	2.09				

**Supplemental Table 2**  
**Intraline H+/H-**

<b>Column ID</b>	<b>p-value</b> <b>(Hes+ vs. Hes-)</b>	<b>Fold-Change</b> <b>(Hes+ vs. Hes-)</b>	<b>p-value</b> <b>(Nurr+ vs. Nurr-)</b>	<b>Fold-Change</b> <b>(Nurr+ vs. Nurr-)</b>	<b>p-value</b> <b>(Pitx+ vs. Pitx-)</b>	<b>Fold-Change</b> <b>(Pitx+ vs. Pitx-)</b>
DPYSL4	0.0074	2.07				
9430041J12RIK	0.0144	2.06				
B230215L15RIK	0.0018	2.05	0.0125	-1.69	0.0019	-2.03
A230057G18RIK	0.0098	2.04				
NR2F1	0.0119	2.03	0.0243	1.85		
IL18	0.0487	2.03				
ZSWIM5	0.0073	2.02			0.0256	1.75
A730017D01RIK	0.0032	2.01				
2210015K02RIK	0.0117	-2.01				
1810015A11RIK	0.0192	-2.01				
ZFP185	0.0340	-2.02				
EPS8L2	0.0318	-2.02				
CDS1	0.0379	-2.03			0.0210	2.24
BC013481	0.0332	-2.04				
MT2	0.0436	-2.04				
ANKRD56	0.0221	-2.06				
0610005K03RIK	0.0204	-2.07				
FBLIM1	0.0435	-2.07				
4930539E08RIK	0.0452	-2.07				
CNKSR1	0.0180	-2.07				
CYP2S1	0.0152	-2.07				
ADAM32	0.0101	-2.07				
SLC35F2	0.0251	-2.07				
PLP2	0.0376	-2.08				
TCF21	0.0288	-2.09				
HORMAD2	0.0195	-2.09				
STX3	0.0231	-2.10				
ATP2A3	0.0027	-2.11			0.0250	-1.66
LOC218482	0.0229	-2.12				
HHEX	0.0180	-2.12				
HSPBAP1	0.0500	-2.13				
TES	0.0380	-2.14	0.0355	2.17	0.0073	2.87

**Supplemental Table 2**

**Intraline H+/H-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
BC025833	0.0494	-2.14				
ELF3	0.0354	-2.16				
DRR1	0.0435	-2.16				
BCAT2	0.0348	-2.18				
BC080695	0.0237	-2.20				
1700023F06RIK	0.0128	-2.20				
ADAM19	0.0094	-2.21				
GNA14	0.0235	-2.22				
TMEM119	0.0122	-2.23				
ANPEP	0.0174	-2.24				
AARD	0.0185	-2.26				
APOD	0.0414	-2.26				
PDLIM7	0.0337	-2.27				
2410078J06RIK	0.0409	-2.27				
DES	0.0297	-2.28				
D9ERTD280E	0.0458	-2.29				
WT1	0.0495	-2.30				
TBX1	0.0227	-2.31				
THY1	0.0366	-2.32				
SOX15	0.0294	-2.32				
TMPRSS2	0.0055	-2.34				
LOC381269	0.0039	-2.35				
FGF4	0.0075	-2.35				
ACTC1	0.0371	-2.36				
ACTN2	0.0294	-2.36				
TRIML1	0.0402	-2.37				
PRSS8	0.0190	-2.38				
PIWIL2	0.0165	-2.38				
C330019L16	0.0103	-2.39				
DND1	0.0376	-2.41				
LOC245128	0.0041	-2.41				
B4GALNT2	0.0468	-2.43				

Supplemental Table 2

Intraline H+/H-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
TPM1	0.0485	-2.44				
LOC331259	0.0366	-2.44				
BC025872	0.0254	-2.44				
LRRC34	0.0249	-2.45				
LIPH	0.0440	-2.45				
ITGA3	0.0128	-2.45				
MEOX2	0.0023	-2.46				
B3GNT7	0.0226	-2.46				
2310061N23RIK	0.0434	-2.47				
HIC1	0.0095	-2.48				
AKAP12	0.0336	-2.50				
GLS2	0.0399	-2.50				
2310047N01RIK	0.0028	-2.50				
LOC329984	0.0261	-2.52				
RAB27A	0.0123	-2.52				
LAMA3	0.0350	-2.53				
IGFBP3	0.0361	-2.54			0.0441	-2.43
LOC380889	0.0082	-2.56				
AIRE	0.0386	-2.58				
ZCCHC5	0.0174	-2.58				
TEX14	0.0366	-2.59				
FRRS1	0.0486	-2.59				
KRT1-17	0.0456	-2.60				
OLFML1	0.0185	-2.61				
LOC620807	0.0239	-2.61				
LOC384553	0.0068	-2.64				
LOC218840	0.0218	-2.65				
CLCNKB	0.0300	-2.66				
ARHGEF16	0.0197	-2.68				
ZFP296	0.0296	-2.69				
MYL4	0.0068	-2.69				
4930529M09RIK	0.0047	-2.72				



## Supplemental Table 2

## Intraline H+/H-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
1190003J15RIK	0.0379	-2.73				
NDG2	0.0278	-2.76				
CDH1	0.0311	-2.77				
GM817	0.0162	-2.78				
MREG	0.0359	-2.78				
D14ERTD668E	0.0265	-2.80				
AA467197	0.0099	-2.83				
SLC39A4	0.0147	-2.84			0.0373	2.36
1700019D03RIK	0.0175	-2.86			0.0261	-2.63
F11R	0.0194	-2.87				
5430425C04RIK	0.0176	-2.88				
CXCL12	0.0373	-2.94				
PDZK1	0.0038	-2.96				
9430073N08RIK	0.0269	-2.96				
COL1A1	0.0373	-2.99				
4921530G04RIK	0.0343	-3.00				
FOXH1	0.0242	-3.02				
TCL1	0.0352	-3.04				
1700007E06RIK	0.0202	-3.05				
LOC634428	0.0136	-3.05				
3830422N12RIK	0.0066	-3.09				
KCNK1	0.0192	-3.11				
2610305D13RIK	0.0248	-3.14				
SOSTDC1	0.0325	-3.14				
GJB3	0.0456	-3.16				
SPINT1	0.0122	-3.20				
SLC40A1	0.0115	-3.26				
LOC383616	0.0217	-3.28				
SERPINA3G	0.0160	-3.34				
EBAF	0.0363	-3.34				
C430020H24RIK	0.0251	-3.40				
TCFAP2C	0.0264	-3.42				

**Supplemental Table 2**

**Intraline H+/H-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
OSR2	0.0022	-3.42				
TCFCP2L1	0.0148	-3.43				
NODAL	0.0199	-3.45				
2610027C15RIK	0.0265	-3.47				
PGA5	0.0254	-3.47				
GDF3	0.0495	-3.49				
BC004728	0.0258	-3.56				
COL3A1	0.0116	-3.57				
2410076I21RIK	0.0062	-3.64				
2210409E12RIK	0.0203	-3.65				
RBM35A	0.0329	-3.69				
PRSS19	0.0465	-3.72				
TAF7L	0.0055	-3.79				
RBPMS	0.0267	-3.82				
LAPTM5	0.0466	-3.89				
APOC1	0.0215	-3.91				
1700012H05RIK	0.0258	-3.96				
FOXQ1	0.0259	-3.99				
OTTMUSG0000001	0.0123	-4.02				
MYL3	0.0008	-4.12				
2410146L05RIK	0.0380	-4.17				
A530057A03RIK	0.0107	-4.17				
PLA2G10	0.0423	-4.37				
CAR4	0.0336	-4.47				
LEFTB	0.0294	-4.75				
DPPA3	0.0459	-4.86				
TRH	0.0120	-4.89	0.0200	-4.22	0.0046	-6.46
2410004F06RIK	0.0344	-4.97				
LUM	0.0029	-5.08				
CLDN4	0.0493	-5.09				
PLAC8	0.0057	-5.16				
PLA2G1B	0.0393	-5.22				

**Supplemental Table 2**  
**Intraline H+/H-**

<b>Column ID</b>	<b>p-value</b> <b>(Hes+ vs. Hes-)</b>	<b>Fold-Change</b> <b>(Hes+ vs. Hes-)</b>	<b>p-value</b> <b>(Nurr+ vs. Nurr-)</b>	<b>Fold-Change</b> <b>(Nurr+ vs. Nurr-)</b>	<b>p-value</b> <b>(Pitx+ vs. Pitx-)</b>	<b>Fold-Change</b> <b>(Pitx+ vs. Pitx-)</b>
FABP3	0.0025	-5.29				
GRB7	0.0408	-5.41				
KLF2	0.0245	-5.47				
DPPA4	0.0401	-5.51				
FBXO15	0.0484	-5.56				
TGFBI	0.0102	-5.87				
GSTP2	0.0134	-6.43				
CLDN6	0.0146	-7.83				
PEM	0.0393	-8.01				

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
EGFP	0.0000	14.67	0.0001	10.64	0.0000	16.47
TH			0.0314	8.10	0.0028	25.05
LOC381270			0.0021	6.56	0.0005	9.59
MYRIP			0.0006	6.49	0.0004	7.14
NR4A2			0.0076	6.30	0.0013	11.13
SLC17A6			0.0052	6.12	0.0010	9.97
SCL0001243.1_522			0.0129	5.72	0.0006	16.13
MARCH4.			0.0026	5.57	0.0003	9.86
EFCBP1			0.0027	5.49	0.0005	8.57
2900019M05RIK			0.0004	5.38	0.0002	6.13
CBLN1			0.0013	4.98		
LOC268288			0.0298	4.96		
EBF3	0.0337	2.45	0.0011	4.91	0.0001	9.10
PITX3			0.0164	4.53	0.0005	12.69
SEZ6L			0.0022	4.52	0.0012	5.14
CHST8			0.0006	4.52	0.0003	5.31
PCDH17			0.0037	4.41		
RET			0.0098	4.22	0.0002	12.15
PGBD5			0.0003	4.19	0.0001	4.81
UNCX4.1			0.0017	4.19	0.0006	5.20
3110018A08RIK	0.0355	2.55	0.0039	4.10	0.0003	7.39
ADCYAP1			0.0017	4.07		
CHRNA3			0.0003	4.06	0.0023	2.91
A230070D14RIK			0.0029	4.00	0.0124	2.99
PRKCB			0.0030	3.87	0.0162	2.77
C1QL1			0.0005	3.85	0.0002	4.35
NRN1			0.0072	3.83	0.0003	7.75
BRUNOL4			0.0021	3.82	0.0115	2.79
DNAJC6			0.0083	3.78	0.0074	3.87
CHGA			0.0013	3.67	0.0391	2.06
SERPINI1			0.0015	3.62	0.0032	3.16
NEFM			0.0163	3.57		

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
PDZRN3			0.0000	3.54	0.0000	4.75
SCL000121.1_106			0.0061	3.53	0.0325	2.50
CHRNA5			0.0002	3.47		
2900075A18RIK			0.0105	3.46	0.0220	2.94
CADPS			0.0393	3.45		
1700028M03RIK			0.0042	3.44	0.0042	3.44
D130050A01RIK			0.0036	3.42	0.0293	2.32
3110006E14RIK			0.0207	3.38		
A930017M01RIK			0.0060	3.37	0.0423	2.29
LOC328644			0.0025	3.34	0.0027	3.30
DCX			0.0071	3.34	0.0283	2.53
CRMP1			0.0141	3.33		
RAP2IP			0.0022	3.33	0.0263	2.19
C230022N09RIK			0.0428	3.33		
5330430C04RIK			0.0057	3.32	0.0133	2.82
PCSK2			0.0243	3.32		
SNCA			0.0396	3.24	0.0196	3.94
RBM11			0.0049	3.24	0.0021	3.80
KCNIP3			0.0084	3.20	0.0253	2.57
NEF3			0.0178	3.19		
CHRNA4			0.0008	3.13	0.0006	3.27
SCHIP1			0.0004	3.11	0.0003	3.19
DUSP8			0.0123	3.10	0.0268	2.64
EBF2	0.0059	3.68	0.0134	3.10	0.0028	4.30
A730098N08RIK			0.0008	3.06	0.0001	4.10
5530400B01RIK			0.0172	3.05	0.0496	2.42
DCAMKL1			0.0093	3.02		
SAMD3			0.0234	3.01		
DPP6			0.0281	3.01	0.0317	2.92
LRRN3			0.0143	3.00	0.0344	2.50
CELSR3			0.0035	2.97	0.0152	2.34
GPR83			0.0062	2.97	0.0048	3.12



Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
SORCS3			0.0063	2.96		
CHL1			0.0377	2.93	0.0229	3.32
SLC35D3			0.0084	2.93	0.0004	5.27
AB182283			0.0375	2.92		
D10BWG1379E			0.0016	2.92	0.0061	2.40
CACNA2D3			0.0247	2.92	0.0072	3.85
STMN4			0.0390	2.92	0.0378	2.94
LOC219228			0.0062	2.91		
9430064K01RIK			0.0169	2.90	0.0260	2.65
ELMO1			0.0005	2.90	0.0003	3.05
SCG3			0.0129	2.87	0.0486	2.21
AW212394			0.0293	2.86	0.0268	2.92
GALNT9			0.0012	2.85	0.0001	3.95
SGPP2			0.0101	2.83	0.0014	4.08
STK32B			0.0093	2.82	0.0131	2.65
B930076A02			0.0053	2.80		
MAST1			0.0414	2.79		
2310056B04RIK			0.0026	2.77	0.0002	4.31
2900054D09RIK			0.0229	2.76		
RUFY3			0.0191	2.75		
PTPRO			0.0356	2.74		
RGS9			0.0343	2.74	0.0211	3.07
LOC381749			0.0329	2.74	0.0272	2.86
CXCR4			0.0105	2.70		
GNG3			0.0207	2.70		
SCL0002012.1_0			0.0006	2.69	0.0119	1.88
PNMA2			0.0086	2.68		
RAPGEF5			0.0072	2.67	0.0184	2.29
CACNA2D1			0.0103	2.66	0.0371	2.13
C630025L14			0.0101	2.66		
CHRN2			0.0093	2.65	0.0422	2.05
GPRIN1			0.0348	2.65		

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
NPTX2			0.0076	2.64		
SPIRE2			0.0112	2.64	0.0254	2.29
RPS6KL1			0.0037	2.64	0.0245	2.00
9630025O15RIK			0.0098	2.63	0.0014	3.67
9830143E02RIK			0.0275	2.63	0.0141	3.02
LOC237730			0.0485	2.63		
GRIA2			0.0274	2.62		
SEZ6			0.0154	2.62		
LHX1	0.0011	3.40	0.0059	2.61	0.0494	1.87
GDAP1			0.0323	2.61		
DIRAS1			0.0203	2.60		
A2BP1			0.0498	2.60		
UTS2R			0.0005	2.60	0.0002	2.91
FOXP2			0.0254	2.56	0.0041	3.67
SCL0003187.1_40			0.0136	2.56		
GABRB3			0.0133	2.55	0.0425	2.08
MLLT11			0.0257	2.53		
LRFN2			0.0078	2.52		
SEZ6L2			0.0316	2.52		
SPNB3			0.0414	2.51		
2600009P04RIK			0.0246	2.50		
GM440			0.0421	2.50		
KIF5A			0.0217	2.50		
D230005D02RIK			0.0046	2.49	0.0213	2.00
OLFM1			0.0108	2.49		
LOC212390			0.0021	2.49	0.0034	2.34
EFCBP2			0.0348	2.48		
SCN3B			0.0294	2.48	0.0064	3.35
ACCN1			0.0043	2.47		
GM50			0.0050	2.47	0.0162	2.09
POU2F2			0.0369	2.46		
D930042A21RIK			0.0244	2.46		

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
CNTN2	0.0238	1.53	0.0001	2.45	0.0001	2.49
BRUNOL6			0.0426	2.45		
2700045K19RIK			0.0327	2.45		
CBFA2T1H			0.0160	2.43	0.0165	2.42
LEMD1			0.0138	2.42	0.0058	2.80
LOC230959			0.0053	2.42	0.0003	3.70
GDAP1L1			0.0371	2.41		
ELAVL3			0.0244	2.40		
MYH3			0.0278	2.40	0.0234	2.48
5730410E15RIK			0.0244	2.40	0.0489	2.10
ST18	0.0102	2.64	0.0181	2.39		
VAV3			0.0009	2.39		
SCT			0.0355	2.38		
6330407J23RIK			0.0427	2.38		
GUCY2C			0.0026	2.37	0.0001	3.84
6230400G14RIK			0.0051	2.36	0.0098	2.16
SCN3A			0.0068	2.36	0.0076	2.32
PBX3			0.0129	2.35	0.0449	1.93
9030205A07RIK			0.0396	2.32		
SCL00272790.1_298			0.0159	2.32	0.0092	2.54
LMO3	0.0403	1.81	0.0068	2.32	0.0002	3.91
3110054C06RIK			0.0428	2.29		
PBX1			0.0213	2.28	0.0012	3.71
PFTK1			0.0050	2.28	0.0004	3.18
6530413N01RIK	0.0166	2.41	0.0234	2.27	0.0174	2.39
A830020B06RIK			0.0220	2.27		
A230051N06RIK			0.0010	2.25	0.0075	1.82
5330403D14RIK			0.0085	2.24	0.0019	2.77
NAPB			0.0295	2.23		
AP3B2			0.0291	2.23		
C230081G24RIK			0.0050	2.23	0.0016	2.58
MGC106740			0.0124	2.23	0.0175	2.12

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
GGTL3			0.0056	2.22	0.0037	2.35
LOC385625			0.0082	2.22		
MAPK8IP2			0.0328	2.22		
RAB6B			0.0456	2.22		
SGNE1			0.0187	2.22	0.0400	1.96
KIF5C			0.0107	2.21	0.0460	1.80
HOMER2			0.0007	2.20	0.0040	1.87
OPN3			0.0020	2.20	0.0001	3.00
OPLAH			0.0055	2.20		
2210407G14RIK			0.0282	2.19		
1500031A17RIK			0.0218	2.18		
B230208J24RIK			0.0222	2.18	0.0029	3.01
TES	0.0380	-2.14	0.0355	2.17	0.0073	2.87
5033421J10RIK			0.0309	2.16		
2900009C16RIK			0.0435	2.16	0.0369	2.23
1500041B16RIK			0.0268	2.16		
GPR22			0.0090	2.16		
D130049O21RIK			0.0288	2.15		
CDK5R1			0.0408	2.14		
C630024B01RIK			0.0255	2.14	0.0082	2.56
PHLDA1			0.0235	2.12	0.0084	2.49
E530016P10RIK			0.0233	2.12	0.0010	3.52
NXPH3			0.0097	2.12	0.0003	3.37
LOC381125			0.0126	2.12	0.0043	2.46
9430089E08RIK			0.0202	2.11		
MAPRE2			0.0106	2.11	0.0267	1.86
LOC381813			0.0218	2.11		
APBA2BP			0.0232	2.10	0.0061	2.59
1810044J04RIK			0.0190	2.08	0.0009	3.28
AAK1			0.0298	2.08		
ACTL6			0.0480	2.08		
APC2			0.0264	2.08	0.0180	2.20

Supplemental Table 2

Intraline N+/N-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
NRG1			0.0104	2.07	0.0215	1.88
ARG2			0.0438	2.07		
PARP6			0.0151	2.06	0.0479	1.76
A230078I05RIK			0.0451	2.06		
TMEM35			0.0193	2.05		
5330439J01RIK			0.0257	2.04	0.0389	1.92
6330505N24RIK			0.0343	2.04		
ABR			0.0104	2.04	0.0399	1.72
KCNG4			0.0097	2.03	0.0054	2.18
NMS			0.0172	2.02		
ELAVL2			0.0368	2.01	0.0139	2.35
UNC13A			0.0094	2.01	0.0166	1.87
LOC215090			0.0074	2.01	0.0263	1.73
6430517E21RIK	0.0245	1.86	0.0140	2.00		
D130032J17RIK	0.0354	1.98	0.0327	2.00	0.0040	2.78
SOX21			0.0487	-2.00	0.0023	-3.38
NOTCH1	0.0450	1.95	0.0369	-2.02	0.0020	-3.25
4930422G04RIK			0.0170	-2.07	0.0250	-1.96
CDC25C			0.0470	-2.13	0.0324	-2.29
DCTD			0.0481	-2.17	0.0290	-2.39
SOX2			0.0210	-2.17	0.0024	-3.05
HMGB2			0.0392	-2.20	0.0180	-2.54
WNT7B	0.0016	3.38	0.0222	-2.20	0.0010	-3.69
ASCL1	0.0072	2.38	0.0114	-2.22	0.0043	-2.56
ESPL1			0.0464	-2.24		
PDLIM3			0.0028	-2.26	0.0009	-2.58
A830059I20RIK			0.0163	-2.27	0.0013	-3.40
GAD1	0.0168	2.68	0.0385	-2.28	0.0019	-4.06
FGFBP3	0.0108	3.18	0.0460	-2.35	0.0005	-6.16
GRB10			0.0057	-2.37		
TAL2			0.0362	-2.39		
DLL1	0.0161	2.28	0.0064	-2.64	0.0255	-2.12

**Supplemental Table 2**  
**Intraline N+/N-**

<b>Column ID</b>	<b>p-value</b> <b>(Hes+ vs. Hes-)</b>	<b>Fold-Change</b> <b>(Hes+ vs. Hes-)</b>	<b>p-value</b> <b>(Nurr+ vs. Nurr-)</b>	<b>Fold-Change</b> <b>(Nurr+ vs. Nurr-)</b>	<b>p-value</b> <b>(Pitx+ vs. Pitx-)</b>	<b>Fold-Change</b> <b>(Pitx+ vs. Pitx-)</b>
MEST			0.0282	-2.69	0.0335	-2.59
NKX2-2			0.0087	-2.69	0.0002	-5.27
CDCA8			0.0468	-2.71	0.0475	-2.70
NRARP	0.0236	2.75	0.0225	-2.77	0.0012	-5.16
TDH			0.0440	-3.59		
GATA2			0.0300	-3.67	0.0030	-7.09
HES5	0.0070	4.12	0.0092	-3.86	0.0021	-5.45
TRH	0.0120	-4.89	0.0200	-4.22	0.0046	-6.46

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
SLC6A3					0.0112	27.03
TH			0.0314	8.10	0.0028	25.05
EGFP	0.0000	14.67	0.0001	10.64	0.0000	16.47
SCL0001243.1_522			0.0129	5.72	0.0006	16.13
CCK					0.0076	14.58
PITX3			0.0164	4.53	0.0005	12.69
RET			0.0098	4.22	0.0002	12.15
NR4A2			0.0076	6.30	0.0013	11.13
SLC17A6			0.0052	6.12	0.0010	9.97
MARCH4.			0.0026	5.57	0.0003	9.86
LOC381270			0.0021	6.56	0.0005	9.59
EBF3	0.0337	2.45	0.0011	4.91	0.0001	9.10
CHRNA6					0.0001	8.92
EFCBP1			0.0027	5.49	0.0005	8.57
NRN1			0.0072	3.83	0.0003	7.75
3110018A08RIK	0.0355	2.55	0.0039	4.10	0.0003	7.39
MYRIP			0.0006	6.49	0.0004	7.14
2900019M05RIK			0.0004	5.38	0.0002	6.13
KCNV2					0.0079	5.74
CHST8			0.0006	4.52	0.0003	5.31
SLC35D3			0.0084	2.93	0.0004	5.27
UNCX4.1			0.0017	4.19	0.0006	5.20
SEZ6L			0.0022	4.52	0.0012	5.14
PDE1A					0.0068	4.84
PGBD5			0.0003	4.19	0.0001	4.81
PDZRN3			0.0000	3.54	0.0000	4.75
RIT2					0.0440	4.62
5930412G12RIK					0.0199	4.56
C1QL1			0.0005	3.85	0.0002	4.35
2310056B04RIK			0.0026	2.77	0.0002	4.31
EBF2	0.0059	3.68	0.0134	3.10	0.0028	4.30
SCGN					0.0015	4.25

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
D030013I16RIK					0.0235	4.11
A730098N08RIK			0.0008	3.06	0.0001	4.10
CNTNAP4					0.0383	4.08
SGPP2			0.0101	2.83	0.0014	4.08
4833414E09RIK					0.0166	4.02
GALNT9			0.0012	2.85	0.0001	3.95
SNCA			0.0396	3.24	0.0196	3.94
LMO3	0.0403	1.81	0.0068	2.32	0.0002	3.91
DNAJC6			0.0083	3.78	0.0074	3.87
CACNA2D3			0.0247	2.92	0.0072	3.85
GUCY2C			0.0026	2.37	0.0001	3.84
RBM11			0.0049	3.24	0.0021	3.80
GPR158					0.0147	3.74
PBX1			0.0213	2.28	0.0012	3.71
LOC230959			0.0053	2.42	0.0003	3.70
9630025O15RIK			0.0098	2.63	0.0014	3.67
FOXP2			0.0254	2.56	0.0041	3.67
KOR1, GPCR					0.0012	3.65
D230046F09RIK					0.0023	3.62
PTPRU					0.0015	3.52
E530016P10RIK			0.0233	2.12	0.0010	3.52
CBLN4					0.0380	3.51
1700028M03RIK			0.0042	3.44	0.0042	3.44
E430013K19RIK			0.0158	1.92	0.0002	3.43
NXPH3			0.0097	2.12	0.0003	3.37
SCN3B			0.0294	2.48	0.0064	3.35
CHL1			0.0377	2.93	0.0229	3.32
FZD10					0.0063	3.30
LOC328644			0.0025	3.34	0.0027	3.30
1810044J04RIK			0.0190	2.08	0.0009	3.28
CHRNB4			0.0008	3.13	0.0006	3.27
6430550H21RIK					0.0338	3.22



Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
SCHIP1			0.0004	3.11	0.0003	3.19
PFTK1			0.0050	2.28	0.0004	3.18
SERPINI1			0.0015	3.62	0.0032	3.16
DRD2					0.0019	3.15
GPR83			0.0062	2.97	0.0048	3.12
KCTD6			0.0035	1.83	0.0000	3.08
RGS9			0.0343	2.74	0.0211	3.07
ELMO1			0.0005	2.90	0.0003	3.05
9830143E02RIK			0.0275	2.63	0.0141	3.02
B230208J24RIK			0.0222	2.18	0.0029	3.01
OPN3			0.0020	2.20	0.0001	3.00
D14ERTD171E					0.0330	3.00
A230070D14RIK			0.0029	4.00	0.0124	2.99
AW125296					0.0223	2.98
SYT13			0.0220	1.91	0.0008	2.97
STMN4			0.0390	2.92	0.0378	2.94
2900075A18RIK			0.0105	3.46	0.0220	2.94
DPP6			0.0281	3.01	0.0317	2.92
AW212394			0.0293	2.86	0.0268	2.92
GNB3					0.0367	2.92
UTS2R			0.0005	2.60	0.0002	2.91
CHRNA3			0.0003	4.06	0.0023	2.91
TES	0.0380	-2.14	0.0355	2.17	0.0073	2.87
C230071F15RIK			0.0245	1.70	0.0003	2.86
LOC381749			0.0329	2.74	0.0272	2.86
LOC381256					0.0062	2.83
5330430C04RIK			0.0057	3.32	0.0133	2.82
LEMD1			0.0138	2.42	0.0058	2.80
NRXN3	0.0366	2.35			0.0154	2.79
SCL00260315.1_24					0.0263	2.79
BRUNOL4			0.0021	3.82	0.0115	2.79
D130032J17RIK	0.0354	1.98	0.0327	2.00	0.0040	2.78

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
5330403D14RIK			0.0085	2.24	0.0019	2.77
PRKCB			0.0030	3.87	0.0162	2.77
CACNA2D2					0.0025	2.72
BAIAP1			0.0217	1.74	0.0004	2.72
EN1					0.0301	2.66
9430064K01RIK			0.0169	2.90	0.0260	2.65
STK32B			0.0093	2.82	0.0131	2.65
SCL000936.1_18			0.0188	1.59	0.0001	2.65
DUSP8			0.0123	3.10	0.0268	2.64
FIBCD1					0.0417	2.63
APBA2BP			0.0232	2.10	0.0061	2.59
C630016B22RIK			0.0356	1.58	0.0004	2.58
GRIA3					0.0097	2.58
C230081G24RIK			0.0050	2.23	0.0016	2.58
KCNIP3			0.0084	3.20	0.0253	2.57
CHST1			0.0314	1.94	0.0046	2.57
C630024B01RIK			0.0255	2.14	0.0082	2.56
6430587E11RIK					0.0397	2.55
FBXL15			0.0247	1.96	0.0038	2.55
SCL00272790.1_29			0.0159	2.32	0.0092	2.54
DCX			0.0071	3.34	0.0283	2.53
A330066M24RIK			0.0387	1.52	0.0003	2.51
SCL000121.1_106			0.0061	3.53	0.0325	2.50
LRRN3			0.0143	3.00	0.0344	2.50
SAMD11			0.0164	1.92	0.0020	2.50
PHLDA1			0.0235	2.12	0.0084	2.49
CNTN2	0.0238	1.53	0.0001	2.45	0.0001	2.49
MYH3			0.0278	2.40	0.0234	2.48
B930011P16RIK			0.0124	1.99	0.0024	2.46
EN2					0.0053	2.46
BC037594					0.0050	2.46
LOC381125			0.0126	2.12	0.0043	2.46

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
C77370			0.0191	1.88	0.0024	2.45
CBFA2T1H			0.0160	2.43	0.0165	2.42
5530400B01RIK			0.0172	3.05	0.0496	2.42
D10BWG1379E			0.0016	2.92	0.0061	2.40
EPB4.1L4A					0.0012	2.40
FUT8			0.0308	1.76	0.0026	2.39
6530413N01RIK	0.0166	2.41	0.0234	2.27	0.0174	2.39
CCKBR					0.0237	2.38
1190005I06RIK					0.0226	2.38
TAGLN3					0.0336	2.37
SLC39A4	0.0147	-2.84			0.0373	2.36
CLDN5					0.0303	2.35
ELAVL2			0.0368	2.01	0.0139	2.35
GGTL3			0.0056	2.22	0.0037	2.35
OPRK1					0.0020	2.34
LOC212390			0.0021	2.49	0.0034	2.34
CELSR3			0.0035	2.97	0.0152	2.34
BQ952480					0.0010	2.32
D130050A01RIK			0.0036	3.42	0.0293	2.32
SCN3A			0.0068	2.36	0.0076	2.32
D230034L24RIK					0.0190	2.31
RAB15					0.0192	2.31
1700080P15RIK					0.0087	2.30
RAPGEF5			0.0072	2.67	0.0184	2.29
A930017M01RIK			0.0060	3.37	0.0423	2.29
SPIRE2			0.0112	2.64	0.0254	2.29
SCL000548.1_6					0.0406	2.27
CDS1	0.0379	-2.03			0.0210	2.24
C230004E12RIK			0.0234	1.79	0.0037	2.24
2900009C16RIK			0.0435	2.16	0.0369	2.23
MPP3			0.0218	1.86	0.0054	2.22
BFSP2					0.0120	2.22

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
2900022H01RIK			0.0388	1.90	0.0135	2.22
SCG3			0.0129	2.87	0.0486	2.21
APC2			0.0264	2.08	0.0180	2.20
RAP2IP			0.0022	3.33	0.0263	2.19
EPB4.1	0.0106	1.63	0.0087	1.66	0.0004	2.19
4833431P16RIK					0.0330	2.18
WHRN					0.0238	2.18
KCNG4			0.0097	2.03	0.0054	2.18
LOC232937			0.0139	1.71	0.0012	2.18
6230400G14RIK			0.0051	2.36	0.0098	2.16
ROBO1	0.0346	1.69	0.0140	1.89	0.0045	2.16
GPR24			0.0315	1.67	0.0035	2.15
MGST2					0.0301	2.14
A730040I05RIK	0.0076	1.77	0.0034	1.92	0.0011	2.13
VAV2			0.0033	1.98	0.0016	2.13
CACNA2D1			0.0103	2.66	0.0371	2.13
MGC106740			0.0124	2.23	0.0175	2.12
4930477M19			0.0445	1.83	0.0164	2.12
REM2			0.0230	1.99	0.0153	2.11
5730410E15RIK			0.0244	2.40	0.0489	2.10
TYRP1			0.0073	1.46	0.0000	2.10
DSCAM			0.0411	1.67	0.0066	2.10
2900027M19RIK					0.0400	2.09
GM50			0.0050	2.47	0.0162	2.09
LZF			0.0020	1.76	0.0003	2.08
GABRB3			0.0133	2.55	0.0425	2.08
1700008B15RIK					0.0079	2.07
INPP4B					0.0003	2.07
MYT1	0.0034	2.58	0.0319	1.88	0.0167	2.06
DLK1					0.0403	2.06
PEP4			0.0097	1.82	0.0029	2.06
CHGA			0.0013	3.67	0.0391	2.06

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
MAG11			0.0220	1.48	0.0004	2.06
BNC2					0.0402	2.05
6720430015	0.0198	1.98			0.0156	2.05
CCL27			0.0371	1.96	0.0279	2.05
CHRNA2			0.0093	2.65	0.0422	2.05
SGIP1			0.0319	1.89	0.0191	2.04
6330442E10RIK					0.0456	2.04
2900083I11RIK			0.0092	1.87	0.0043	2.04
CTNNA1					0.0003	2.03
NEUROD1			0.0184	1.75	0.0049	2.03
D130099D04RIK			0.0027	1.86	0.0010	2.03
ADCY5					0.0093	2.03
RBP3					0.0021	2.03
DOCK4			0.0038	1.92	0.0023	2.02
BC036313					0.0243	2.01
EBF1			0.0110	1.88	0.0061	2.01
D230005D02RIK			0.0046	2.49	0.0213	2.00
RPS6KL1			0.0037	2.64	0.0245	2.00
GNAI1					0.0151	2.00
HYAL1					0.0168	-2.01
ARID5B					0.0462	-2.03
3110004L20RIK	0.0290	1.47	0.0298	-1.46	0.0006	-2.03
6430503K07RIK			0.0421	-1.51	0.0022	-2.03
GPC4					0.0054	-2.03
B230215L15RIK	0.0018	2.05	0.0125	-1.69	0.0019	-2.03
STK17B					0.0210	-2.03
NKD1					0.0427	-2.03
FZD9	0.0052	1.95			0.0034	-2.03
FSTL					0.0199	-2.03
DDIT4L					0.0375	-2.03
TM4SF10					0.0138	-2.05
TMPRSS5					0.0156	-2.05

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
E130115E03RIK					0.0350	-2.05
SIX5					0.0347	-2.05
PMF1					0.0379	-2.05
PTN					0.0486	-2.06
9230102O04RIK					0.0317	-2.06
VIL2					0.0201	-2.06
MANSC1					0.0257	-2.06
LOC195646					0.0224	-2.06
1200008N06RIK			0.0473	-1.68	0.0093	-2.06
ACAA2					0.0486	-2.07
D11ERTD759E					0.0186	-2.07
PALD					0.0348	-2.07
SERPINH1					0.0151	-2.07
2810003C17RIK					0.0302	-2.07
BC065123			0.0240	-1.62	0.0021	-2.07
D11ERTD18E			0.0355	-1.71	0.0070	-2.08
BRIP1					0.0241	-2.09
2700063P19RIK					0.0176	-2.10
EPHB1	0.0095	2.79			0.0446	-2.11
SCL0001708.1_442					0.0210	-2.11
MSN					0.0083	-2.11
BC037006			0.0451	-1.59	0.0034	-2.12
9530051K01RIK					0.0154	-2.12
DLL1	0.0161	2.28	0.0064	-2.64	0.0255	-2.12
IRX2	0.0403	2.19			0.0475	-2.12
4833445A15RIK					0.0380	-2.12
CPNE2					0.0254	-2.13
SKP2					0.0498	-2.13
SCL0002775.1_4					0.0184	-2.13
B130015M16RIK					0.0277	-2.13
AW049604					0.0214	-2.13
GADD45G			0.0228	-1.89	0.0087	-2.15

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
SMO					0.0062	-2.16
SHHRS					0.0024	-2.16
SPARCL1					0.0314	-2.16
FATH					0.0110	-2.17
STARD5					0.0114	-2.17
C130091E20					0.0203	-2.17
2010005O13RIK					0.0257	-2.17
TYRO3					0.0053	-2.18
NPY					0.0304	-2.18
PIPOX					0.0022	-2.18
ESM1					0.0280	-2.21
LDB2					0.0129	-2.21
C230067O06RIK					0.0387	-2.21
TIMP3					0.0254	-2.21
PLAT					0.0393	-2.23
SHOX2					0.0402	-2.23
NKX6-2	0.0129	2.16			0.0100	-2.24
HEPH					0.0245	-2.24
MEIS1					0.0083	-2.24
PEA15	0.0349	1.63			0.0020	-2.25
NFIB					0.0123	-2.26
ACP6					0.0293	-2.26
6030410I10RIK			0.0241	-1.91	0.0066	-2.27
ST8SIA5					0.0102	-2.28
C79407					0.0461	-2.28
FABP7					0.0236	-2.28
CDC25C			0.0470	-2.13	0.0324	-2.29
SNAP23					0.0280	-2.30
ABAT					0.0196	-2.30
9830169E20RIK					0.0255	-2.30
1200003E16RIK					0.0321	-2.30
8430436L14RIK					0.0484	-2.31

## Supplemental Table 2

## Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
SCL000981.1_40					0.0312	-2.31
TRPC7					0.0164	-2.31
ZFYVE21					0.0268	-2.32
KIF4					0.0436	-2.32
FNDC3B					0.0184	-2.33
LOC381336					0.0080	-2.33
AFF1					0.0212	-2.33
SLC38A5					0.0326	-2.33
WASPIP					0.0272	-2.33
SCL0004175.1_57					0.0096	-2.34
IGF2					0.0448	-2.34
RPA1					0.0196	-2.35
ADD3					0.0242	-2.36
TTYH1	0.0190	2.38			0.0202	-2.36
2310058J06RIK					0.0076	-2.36
CASKIN2					0.0076	-2.36
BC024139	0.0088	2.42			0.0101	-2.37
2610019I03RIK					0.0447	-2.38
PTBP1					0.0143	-2.38
CCL17					0.0102	-2.38
LOC242915					0.0030	-2.39
MLF1					0.0108	-2.39
A130029H05RIK					0.0246	-2.39
GP38					0.0096	-2.39
DCTD			0.0481	-2.17	0.0290	-2.39
2310045L10RIK					0.0279	-2.40
GPR23					0.0458	-2.40
SEPP1					0.0131	-2.40
1300014I06RIK					0.0036	-2.41
PSMC3IP					0.0345	-2.41
PLD2					0.0097	-2.42
E130307J07RIK					0.0148	-2.42



**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
5830411I20			0.0326	-1.96	0.0080	-2.43
IGFBP3	0.0361	-2.54			0.0441	-2.43
TGIF					0.0353	-2.44
D130063H01RIK					0.0259	-2.44
THSD4					0.0084	-2.45
LHFP					0.0082	-2.45
MMP14					0.0243	-2.45
E230038B10RIK					0.0384	-2.46
SPATA13			0.0292	-1.82	0.0029	-2.46
AU040950					0.0077	-2.46
C130034I18RIK					0.0030	-2.46
LOC385461					0.0283	-2.47
GAS2L3					0.0389	-2.48
RAB32					0.0490	-2.48
FJX1					0.0267	-2.48
SELENBP1					0.0301	-2.48
S100A10					0.0395	-2.50
EVC2					0.0291	-2.50
HEY2	0.0435	1.99			0.0108	-2.50
E030040G24RIK					0.0301	-2.51
LOC231663					0.0414	-2.51
EGR2					0.0155	-2.52
VIM					0.0132	-2.53
LOH11CR2A					0.0225	-2.54
HMGB2			0.0392	-2.20	0.0180	-2.54
SCL0002449.1_77					0.0390	-2.54
FOXM1					0.0354	-2.55
ASCL1	0.0072	2.38	0.0114	-2.22	0.0043	-2.56
USP2					0.0064	-2.56
PHXR4					0.0333	-2.56
HSPB8					0.0491	-2.57
SMPDL3A					0.0404	-2.57

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
BC032967					0.0053	-2.58
PDLIM3			0.0028	-2.26	0.0009	-2.58
1110055E19RIK					0.0477	-2.59
LRIG3					0.0416	-2.59
B2M					0.0268	-2.59
MEST			0.0282	-2.69	0.0335	-2.59
ABCC4					0.0391	-2.60
40429					0.0153	-2.60
CALMBP1					0.0238	-2.61
SLC22A3					0.0071	-2.62
GSR					0.0162	-2.62
A730054J21RIK					0.0434	-2.63
CKAP2					0.0225	-2.63
1700019D03RIK	0.0175	-2.86			0.0261	-2.63
NFI-X3					0.0328	-2.64
1110018J23RIK					0.0026	-2.64
UACA					0.0412	-2.64
DLX2	0.0479	2.62			0.0445	-2.67
PON2					0.0120	-2.67
SLC2A13					0.0209	-2.67
2010317E24RIK					0.0406	-2.68
4833427B12RIK					0.0452	-2.68
TRIP6					0.0121	-2.68
TPX2					0.0350	-2.68
TMEM47					0.0057	-2.69
3110047P20RIK					0.0460	-2.69
2610524A10RIK					0.0135	-2.69
CDCA8			0.0468	-2.71	0.0475	-2.70
NKX2-3					0.0097	-2.71
FGFR3					0.0051	-2.71
PBXIP1					0.0157	-2.71
PROM					0.0289	-2.71

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
DHRS6					0.0329	-2.72
COL2A1					0.0473	-2.72
2610318C08RIK					0.0406	-2.74
9330140K16RIK					0.0087	-2.75
ADAMTS12					0.0380	-2.75
TEAD2					0.0121	-2.77
PDE2A					0.0099	-2.77
DBI					0.0159	-2.77
NFIA					0.0024	-2.77
TROAP					0.0465	-2.77
CYBA					0.0433	-2.78
COL4A5					0.0247	-2.80
TST					0.0145	-2.80
ST5					0.0070	-2.80
1190002H23RIK					0.0269	-2.80
ZFP36					0.0273	-2.81
FSTL1					0.0222	-2.82
5930402A21					0.0112	-2.82
NUSAP1					0.0359	-2.84
SMAD3			0.0479	-1.99	0.0058	-2.85
2210415K03RIK					0.0400	-2.86
SLC39A12					0.0400	-2.87
BRRN1					0.0441	-2.87
LRP2					0.0420	-2.88
2610017I09RIK	0.0153	2.43			0.0056	-2.88
HTR3A					0.0311	-2.89
MKI67					0.0395	-2.91
RFX4					0.0070	-2.91
ITGB4					0.0097	-2.91
SCARA3					0.0467	-2.92
SFRP1					0.0330	-2.92
P4HA3					0.0089	-2.92

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
ELAVL1					0.0196	-2.93
2310047C17RIK					0.0386	-2.93
PTER					0.0213	-2.95
D4ERTD681E					0.0082	-2.95
MFGE8					0.0280	-2.96
INHBB	0.0457	1.86			0.0021	-2.96
ERBB2					0.0173	-2.96
2310007D09RIK					0.0296	-2.97
PLD1					0.0057	-2.98
CRB1					0.0189	-2.98
GDPD2					0.0188	-2.99
SULF1					0.0084	-3.00
FTHFD					0.0111	-3.01
BC023928					0.0473	-3.01
PLTP					0.0500	-3.01
CDK2					0.0199	-3.01
MT3	0.0297	2.15			0.0039	-3.02
BC006933					0.0340	-3.02
BCL6					0.0370	-3.02
NDE1					0.0203	-3.03
SOX2			0.0210	-2.17	0.0024	-3.05
NFIX					0.0446	-3.05
IGFBP5					0.0185	-3.06
5430433G21RIK					0.0131	-3.06
FZD7					0.0102	-3.07
E030026I10RIK					0.0071	-3.08
NEDD9					0.0122	-3.09
GPR30					0.0142	-3.09
CX3CL1					0.0065	-3.10
C630002C17RIK					0.0362	-3.10
SKAP2					0.0070	-3.11
0610009F02RIK					0.0418	-3.11

Supplemental Table 2

Intraline P+/P-

Column ID	p-value (Hes+ vs. Hes-)	Fold-Change (Hes+ vs. Hes-)	p-value (Nurr+ vs. Nurr-)	Fold-Change (Nurr+ vs. Nurr-)	p-value (Pitx+ vs. Pitx-)	Fold-Change (Pitx+ vs. Pitx-)
MOXD1					0.0274	-3.11
MGST1					0.0124	-3.11
FKBP10					0.0305	-3.14
LAMB2					0.0289	-3.15
IDB3					0.0131	-3.17
HOXA2					0.0357	-3.17
ANXA2					0.0422	-3.19
TACR1					0.0083	-3.19
S100A11					0.0491	-3.21
1110017L21RIK					0.0428	-3.23
FGFRL1					0.0021	-3.23
LRP4					0.0087	-3.23
SPC25					0.0413	-3.23
2310033F14RIK					0.0148	-3.25
SMPDL3B					0.0212	-3.25
PPP1R3C					0.0190	-3.25
NOTCH1	0.0450	1.95	0.0369	-2.02	0.0020	-3.25
WNT7A	0.0134	3.28			0.0138	-3.26
NCAPH					0.0457	-3.27
S100A1					0.0285	-3.27
FAS					0.0359	-3.28
BAG3					0.0190	-3.28
SYT1					0.0411	-3.30
HEY1					0.0325	-3.30
SLC6A17					0.0098	-3.30
2310057H16RIK					0.0421	-3.32
CELSR1					0.0024	-3.35
MCM2					0.0372	-3.36
HTR1A					0.0324	-3.38
SOX21			0.0487	-2.00	0.0023	-3.38
B230343A10RIK			0.0390	-1.73	0.0002	-3.40
A830059I20RIK			0.0163	-2.27	0.0013	-3.40

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
TAGLN2					0.0251	-3.41
MT1					0.0491	-3.41
D1ERTD471E					0.0054	-3.41
PROS1					0.0028	-3.43
OLFML3					0.0482	-3.43
6330404F12RIK	0.0186	2.85			0.0074	-3.45
ATP1A2	0.0153	2.45			0.0020	-3.47
KDEL3					0.0430	-3.48
PLEKHB1					0.0173	-3.50
CHST3	0.0475	2.15			0.0036	-3.50
E430002G05RIK					0.0439	-3.51
TGM2					0.0471	-3.53
LOC434280					0.0169	-3.53
COL5A1					0.0335	-3.54
SALL3	0.0464	2.31			0.0056	-3.56
1110004P15RIK					0.0457	-3.57
CYR61					0.0242	-3.61
B230114P05RIK					0.0111	-3.62
PRC1					0.0284	-3.65
VIT					0.0209	-3.65
METR1					0.0170	-3.68
WNT7B	0.0016	3.38	0.0222	-2.20	0.0010	-3.69
IFITM1					0.0182	-3.70
MNS1					0.0236	-3.75
1110003F05RIK					0.0031	-3.78
DCN					0.0212	-3.83
1110018K11RIK					0.0036	-3.86
KIF2C					0.0430	-3.92
PTX3					0.0135	-3.92
LRIG1					0.0014	-3.93
YAP1					0.0066	-3.95
SPARC					0.0392	-4.00

**Supplemental Table 2**

**Intraline P+/P-**

<b>Column ID</b>	<b>p-value (Hes+ vs. Hes-)</b>	<b>Fold-Change (Hes+ vs. Hes-)</b>	<b>p-value (Nurr+ vs. Nurr-)</b>	<b>Fold-Change (Nurr+ vs. Nurr-)</b>	<b>p-value (Pitx+ vs. Pitx-)</b>	<b>Fold-Change (Pitx+ vs. Pitx-)</b>
NES					0.0041	-4.04
GAD1	0.0168	2.68	0.0385	-2.28	0.0019	-4.06
ACAS2L	0.0383	2.56			0.0046	-4.07
GJA1					0.0214	-4.08
IFITM3					0.0096	-4.16
CCNB1					0.0490	-4.17
PPAP2B					0.0019	-4.19
2310016C16RIK					0.0052	-4.23
MAOB					0.0019	-4.23
NOTCH3					0.0021	-4.23
DIRAS2					0.0139	-4.26
CHODL					0.0167	-4.27
SPON1					0.0057	-4.36
CDCA7					0.0494	-4.38
2310047A01RIK					0.0071	-4.39
LOC237362					0.0299	-4.45
VIAAT	0.0261	3.35			0.0081	-4.51
ZFP36L1					0.0017	-4.56
PBK					0.0208	-4.68
MEGF10					0.0015	-4.73
CTE1					0.0011	-4.83
3000002B06RIK					0.0017	-4.99
SOX9	0.0446	2.31			0.0009	-5.15
NRARP	0.0236	2.75	0.0225	-2.77	0.0012	-5.16
EDNRB					0.0037	-5.26
CCND1					0.0064	-5.27
NKX2-2			0.0087	-2.69	0.0002	-5.27
BC046386					0.0109	-5.42
HES5	0.0070	4.12	0.0092	-3.86	0.0021	-5.45
IDB4	0.0356	2.54			0.0010	-5.52
IDB1					0.0114	-5.58
SLC1A3					0.0037	-5.67

**Supplemental Table 2**  
**Intraline P+/P-**

<b>Column ID</b>	<b>p-value</b> <b>(Hes+ vs. Hes-)</b>	<b>Fold-Change</b> <b>(Hes+ vs. Hes-)</b>	<b>p-value</b> <b>(Nurr+ vs. Nurr-)</b>	<b>Fold-Change</b> <b>(Nurr+ vs. Nurr-)</b>	<b>p-value</b> <b>(Pitx+ vs. Pitx-)</b>	<b>Fold-Change</b> <b>(Pitx+ vs. Pitx-)</b>
DLX1					0.0133	-6.16
FGFBP3	0.0108	3.18	0.0460	-2.35	0.0005	-6.16
TRH	0.0120	-4.89	0.0200	-4.22	0.0046	-6.46
SLC17A8					0.0031	-6.63
CRYBA2					0.0147	-6.63
OLIG1					0.0365	-6.67
GATA2			0.0300	-3.67	0.0030	-7.09
GATA3					0.0061	-7.17
FEV					0.0135	-7.43
2010323F13RIK					0.0049	-7.61
TPH2					0.0113	-9.47
SLC6A4					0.0075	-11.09



**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
TH	0.0065	16.77	0.0022	27.64	0.0014	21.53
CCK	0.0222	8.97	0.0008	40.71	0.0015	19.11
SCL0001243.1_522 (RET)	0.0061	7.30	0.0003	20.97	0.0004	12.37
EFCBP1	0.0001	11.84	0.0004	9.03	0.0001	10.34
ERDR1			0.0475	11.15	0.0314	10.01
RIT2	0.0169	6.59	0.0021	14.33	0.0023	9.72
SLC6A3			0.0212	18.46	0.0397	9.02
H19	0.0086	17.92			0.0184	8.75
RET	0.0048	5.04	0.0001	13.66	0.0002	8.30
DDC	0.0073	6.66	0.0020	10.13	0.0014	8.21
NR4A2	0.0048	7.28	0.0052	7.10	0.0019	7.19
LOC268393	0.0372	7.63			0.0235	7.02
PITX3	0.0145	4.71	0.0010	10.38	0.0014	6.99
SLC17A6	0.0024	7.70	0.0060	5.87	0.0014	6.72
March4.	0.0059	4.55	0.0003	9.81	0.0004	6.68
LOC381270	0.0102	4.32	0.0012	7.67	0.0012	5.75
LOC544988	0.0043	6.48	0.0105	5.02	0.0027	5.70
LMX1A	0.0366	6.33			0.0286	5.42
RBM11	0.0006	4.77	0.0002	6.14	0.0001	5.41
MYRIP	0.0014	5.24	0.0014	5.25	0.0005	5.25
D230050A05	0.0255	4.97	0.0229	5.15	0.0115	5.06
1810036H07RIK	0.0045	23.33				
D030013116RIK	0.0225	4.16	0.0082	5.61	0.0059	4.83
CHRNA6	0.0402	2.50	0.0001	9.18	0.0007	4.79
1700123J19RIK	0.0086	7.89			0.0177	4.79
EBF3	0.0014	4.71	0.0014	4.69	0.0004	4.70
CNTNAP4	0.0451	3.87	0.0138	5.71	0.0120	4.70
C1QL1	0.0001	5.30	0.0003	4.14	0.0000	4.69
5330430C04RIK	0.0007	5.07	0.0015	4.30	0.0003	4.67
LOC331325	0.0027	5.88	0.0184	3.60	0.0028	4.60
NRN1	0.0029	4.71	0.0037	4.44	0.0012	4.57
GLRA2			0.0159	5.78	0.0165	4.52

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
1700001E04RIK	0.0028	5.51	0.0138	3.71	0.0024	4.52
LOC380947	0.0016	4.92	0.0042	3.97	0.0009	4.42
PCSK2	0.0083	4.34	0.0073	4.48	0.0031	4.41
SLC35D3	0.0018	3.88	0.0005	4.98	0.0003	4.40
4833414E09RIK	0.0175	3.96	0.0083	4.84	0.0052	4.38
USP29	0.0081	5.02	0.0230	3.77	0.0060	4.35
CART	0.0095	6.28			0.0147	4.35
PGBD5	0.0004	3.97	0.0002	4.58	0.0001	4.27
CBLN1	0.0006	5.83	0.0124	3.11	0.0010	4.26
NEFM	0.0028	5.50	0.0228	3.28	0.0032	4.25
GPR158	0.0288	3.16	0.0028	5.64	0.0037	4.22
SCG2			0.0257	4.81	0.0202	4.18
CHL1	0.0198	3.44	0.0049	4.86	0.0041	4.09
PDE1A	0.0137	4.04	0.0127	4.12	0.0057	4.08
NEF3	0.0025	4.98	0.0148	3.32	0.0024	4.07
SNCA			0.0038	6.18	0.0080	4.06
PBX1	0.0016	3.55	0.0005	4.39	0.0003	3.94
LOC268288	0.0138	6.49			0.0313	3.94
UNCX4.1	0.0006	5.24	0.0108	2.92	0.0008	3.91
3110018A08RIK	0.0048	3.91	0.0052	3.84	0.0019	3.87
RGS9	0.0175	3.20	0.0034	4.65	0.0031	3.86
STMN4	0.0252	3.26	0.0070	4.48	0.0058	3.82
CHGB			0.0216	4.38	0.0175	3.80
3110006E14RIK	0.0116	3.91	0.0148	3.67	0.0057	3.79
CHST8	0.0006	4.59	0.0045	3.12	0.0005	3.79
MEF2B			0.0431	6.26		
CACNG3			0.0311	5.47	0.0497	3.73
KCNV2	0.0142	4.82			0.0178	3.68
GAP43	0.0228	3.38	0.0127	3.92	0.0077	3.64
CACNA2D3	0.0326	2.74	0.0028	4.77	0.0039	3.61
TES	0.0035	3.27	0.0013	3.88	0.0007	3.56
GPR120	0.0153	4.37			0.0162	3.54

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
LOC328644	0.0045	3.02	0.0008	4.10	0.0006	3.52
ADPN	0.0083	3.14	0.0026	3.94	0.0017	3.52
6430550H21RIK	0.0408	3.06	0.0144	4.03	0.0116	3.51
EN1			0.0013	5.27	0.0033	3.51
MGST2	0.0020	3.38	0.0013	3.63	0.0005	3.50
DNAJC6	0.0187	3.14	0.0074	3.88	0.0050	3.49
MGC106740	0.0021	2.90	0.0002	4.21	0.0002	3.49
CBLN4			0.0177	4.40	0.0201	3.49
2310056B04RIK	0.0017	2.95	0.0002	4.10	0.0002	3.48
GALNT9	0.0005	3.21	0.0002	3.75	0.0001	3.47
SCN3B	0.0140	2.87	0.0023	4.11	0.0022	3.44
A230070D14RIK	0.0074	3.32	0.0053	3.55	0.0024	3.43
1700028M03RIK	0.0015	4.17	0.0126	2.79	0.0016	3.41
SLC18A2			0.0310	3.98	0.0281	3.40
D14ERTD171E			0.0056	4.64	0.0094	3.38
FOXP2	0.0079	3.22	0.0051	3.52	0.0025	3.37
SEZ6L			0.0015	4.91	0.0043	3.28
LOC545013	0.0024	3.71	0.0090	2.89	0.0017	3.28
PITX2	0.0149	4.36			0.0217	3.27
SCL000057.1_28_REVCOMP	0.0089	3.09	0.0052	3.43	0.0027	3.26
2610042L04RIK	0.0028	3.65	0.0111	2.82	0.0021	3.21
9830143E02RIK	0.0072	3.48	0.0159	2.95	0.0045	3.20
LOC545007	0.0062	3.38	0.0115	2.99	0.0035	3.18
ZCCHC12			0.0139	3.86	0.0152	3.16
A930017M01RIK	0.0041	3.63	0.0170	2.75	0.0034	3.16
ATP1B1	0.0089	2.89	0.0039	3.37	0.0023	3.12
GNB3	0.0255	3.19	0.0310	3.04	0.0138	3.12
1700066F09RIK	0.0009	3.23	0.0014	2.99	0.0004	3.11
SCL00272790.1_298	0.0049	2.82	0.0016	3.40	0.0010	3.09
2900075A18RIK	0.0279	2.78	0.0111	3.41	0.0080	3.08
STMN2			0.0357	3.43	0.0290	3.06
CHST1	0.0165	2.13	0.0002	4.37	0.0005	3.05

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
SAMD11	0.0021	2.48	0.0001	3.71	0.0001	3.03
GUCY2C	0.0015	2.54	0.0001	3.61	0.0001	3.03
CAR12	0.0414	2.97	0.0377	3.04	0.0205	3.00
BC002216	0.0221	3.26	0.0440	2.75	0.0156	3.00
A730098N08RIK	0.0011	2.92	0.0008	3.06	0.0003	2.99
AI427515	0.0246	3.07	0.0313	2.90	0.0136	2.98
BRUNOL4	0.0062	3.12	0.0111	2.81	0.0034	2.96
SCL00260315.1_244	0.0090	3.52	0.0442	2.48	0.0093	2.96
SCL000548.1_6	0.0349	2.34	0.0030	3.74	0.0043	2.96
SCHIP1	0.0005	2.98	0.0006	2.90	0.0002	2.94
SGPP2	0.0119	2.75	0.0057	3.14	0.0033	2.94
D130050A01RIK	0.0055	3.15	0.0119	2.74	0.0033	2.94
BRUNOL6			0.0072	3.58	0.0088	2.91
PDZRN3	0.0002	2.91	0.0002	2.90	0.0000	2.90
WFDC1	0.0062	6.06			0.0437	2.89
ADCYAP1	0.0007	4.91			0.0045	2.88
1810015C11RIK			0.0376	3.22	0.0313	2.88
4930555G01RIK	0.0086	3.11	0.0193	2.66	0.0056	2.88
D10BWG1379E	0.0011	3.05	0.0028	2.68	0.0006	2.86
C230022N09RIK	0.0194	4.18			0.0417	2.85
CHRNB4	0.0007	3.19	0.0036	2.53	0.0005	2.84
AW212394			0.0126	3.47	0.0153	2.83
6430587E11RIK			0.0105	3.42	0.0127	2.80
PMFBP1	0.0108	3.01	0.0235	2.59	0.0071	2.79
NRG1	0.0014	2.70	0.0009	2.87	0.0003	2.79
RPEL1	0.0285	2.56	0.0129	3.01	0.0088	2.78
MAST1			0.0299	3.02	0.0232	2.75
FAH	0.0023	2.48	0.0005	3.02	0.0003	2.74
B230208J24RIK	0.0157	2.30	0.0018	3.25	0.0020	2.73
2810411E12RIK			0.0255	3.12	0.0232	2.73
NNAT	0.0302	2.98			0.0226	2.73
RGS7			0.0197	3.07	0.0173	2.71

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
SYT4			0.0190	3.30	0.0236	2.69
1600013E24RIK	0.0020	2.45	0.0005	2.93	0.0003	2.68
ATP10D	0.0036	3.51			0.0067	2.68
SERPINI1	0.0073	2.75	0.0101	2.60	0.0035	2.67
4931440B09RIK			0.0314	3.32	0.0402	2.67
D130083G05RIK	0.0017	3.11	0.0126	2.28	0.0017	2.67
1190005I06RIK	0.0428	2.12	0.0035	3.32	0.0052	2.65
EPB4.1L4A	0.0013	2.39	0.0002	2.94	0.0002	2.65
CACNA2D1	0.0031	3.29	0.0374	2.12	0.0045	2.64
GLIPR1	0.0401	5.15				
KOR1, GPCR	0.0451	1.98	0.0017	3.41	0.0036	2.60
B230112P13RIK	0.0051	2.52	0.0035	2.67	0.0016	2.60
PEG13			0.0085	3.28	0.0133	2.59
LOC381749			0.0163	3.21	0.0221	2.58
POU2F2	0.0388	2.43	0.0224	2.73	0.0146	2.58
SLC18A3			0.0109	3.42	0.0202	2.58
B930046C15RIK	0.0041	3.06	0.0310	2.16	0.0048	2.57
9530064J02	0.0253	3.13			0.0316	2.56
6330417K15RIK			0.0324	3.17	0.0419	2.56
ELMO1	0.0006	2.80	0.0026	2.34	0.0004	2.56
C920007D24RIK	0.0437	2.10	0.0050	3.10	0.0066	2.55
UTS2R	0.0008	2.44	0.0004	2.64	0.0002	2.54
SCN3A	0.0068	2.36	0.0025	2.72	0.0015	2.53
DPP6			0.0254	3.08	0.0320	2.52
EFCBP2	0.0315	2.54	0.0334	2.51	0.0163	2.52
SAMD3	0.0116	3.53			0.0276	2.51
SCGN			0.0020	4.01	0.0109	2.51
SCL000650.1_5			0.0160	2.96	0.0182	2.50
SCL0002133.1_319	0.0139	3.09			0.0193	2.50
CAPN6	0.0484	3.29				
VIP			0.0094	3.57	0.0260	2.48
LOC230959	0.0370	1.84	0.0006	3.31	0.0017	2.47

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
NXPH3	0.0162	1.98	0.0007	3.05	0.0011	2.46
C130036G08			0.0419	3.47		
GNAO			0.0446	2.76	0.0407	2.46
STK32B	0.0191	2.48	0.0210	2.43	0.0093	2.46
E430013K19RIK	0.0020	2.49	0.0025	2.41	0.0008	2.45
DMRTC1A			0.0110	3.08	0.0171	2.45
9630025O15RIK	0.0227	2.28	0.0098	2.63	0.0066	2.45
SYP			0.0197	2.90	0.0226	2.45
SCL000121.1_106	0.0379	2.42	0.0346	2.47	0.0185	2.45
CKMT1	0.0411	2.24	0.0168	2.67	0.0128	2.45
B930076A02	0.0142	2.38	0.0103	2.51	0.0052	2.45
GABRB3	0.0096	2.70	0.0311	2.20	0.0078	2.43
6330505N24RIK	0.0085	2.55	0.0154	2.32	0.0049	2.43
5033421J10RIK	0.0133	2.49	0.0179	2.37	0.0069	2.43
6230400G14RIK	0.0035	2.49	0.0050	2.37	0.0015	2.43
C230081G24RIK	0.0051	2.23	0.0014	2.64	0.0009	2.42
RPS6KL1	0.0058	2.47	0.0077	2.37	0.0026	2.42
SYT13	0.0121	2.06	0.0011	2.83	0.0013	2.42
AI447711	0.0151	1.96	0.0006	2.97	0.0011	2.42
PFTK1	0.0034	2.40	0.0032	2.43	0.0012	2.41
MYH3	0.0084	3.01			0.0132	2.41
CHGA	0.0109	2.56	0.0228	2.26	0.0070	2.40
RAB15	0.0217	2.26	0.0107	2.55	0.0068	2.40
KCTD6	0.0018	1.95	0.0000	2.94	0.0001	2.40
SPIRE2	0.0432	2.08	0.0094	2.72	0.0094	2.38
LOC381674	0.0422	2.43			0.0246	2.38
B230323D24RIK	0.0221	2.81			0.0260	2.38
1110048P06RIK	0.0249	2.59			0.0203	2.37
LOC381256	0.0292	2.18	0.0114	2.55	0.0083	2.36
SERPINF1			0.0283	2.65	0.0266	2.36
LOC270397	0.0101	3.05			0.0192	2.35
A230058N16RIK	0.0041	2.16	0.0011	2.55	0.0007	2.35

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
NRSN2			0.0225	3.26	0.0497	2.35
SEZ6L2			0.0297	2.55	0.0239	2.34
POMC1	0.0479	3.66				
C77370	0.0302	1.78	0.0004	3.08	0.0012	2.34
1810044J04RIK	0.0266	1.98	0.0029	2.73	0.0036	2.33
PCSK1N			0.0267	2.69	0.0291	2.32
ADRA2A	0.0418	2.86				
FOXA2	0.0107	2.58	0.0398	2.07	0.0097	2.31
LMO3	0.0202	2.00	0.0027	2.64	0.0029	2.30
PTPRU			0.0048	2.90	0.0090	2.30
SLCO2A1	0.0071	3.42			0.0267	2.30
LOC329416	0.0054	2.86			0.0096	2.29
ACCN1	0.0033	2.57	0.0191	2.01	0.0032	2.27
BAIAP1	0.0047	2.06	0.0009	2.51	0.0007	2.27
KRT1-23	0.0173	5.10				
E530016P10RIK			0.0031	2.92	0.0068	2.27
GKN1	0.0320	5.87				
LOC382972			0.0238	2.54	0.0227	2.26
4930477M19	0.0089	2.31	0.0125	2.20	0.0044	2.25
OPN3	0.0031	2.10	0.0009	2.41	0.0005	2.25
CHRNA3	0.0013	3.17			0.0057	2.24
4921520P21RIK			0.0077	2.78	0.0132	2.24
SYNGR3			0.0278	2.49	0.0256	2.24
AQP8	0.0478	5.34				
RUFY3			0.0438	2.32	0.0303	2.22
GRIA3	0.0232	2.24	0.0259	2.19	0.0117	2.21
GPR43			0.0348	2.53	0.0365	2.21
BC037594	0.0315	1.89	0.0036	2.58	0.0045	2.21
PSG23	0.0016	2.57	0.0167	1.90	0.0019	2.21
ACSL1	0.0136	2.00	0.0031	2.43	0.0026	2.21
5530400B01RIK			0.0436	2.49	0.0435	2.20
PLCXD3	0.0009	2.19	0.0009	2.21	0.0003	2.20

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
D130043K22RIK	0.0443	1.92	0.0079	2.52	0.0086	2.20
BQ952480	0.0030	2.06	0.0010	2.33	0.0006	2.19
NME7	0.0063	2.15	0.0046	2.23	0.0021	2.19
THBD	0.0241	3.78				
FGF13			0.0203	3.34		
6230403H02RIK	0.0069	2.23	0.0095	2.14	0.0033	2.18
YBX3	0.0036	2.51	0.0273	1.90	0.0041	2.18
CAMK2N1			0.0128	2.61	0.0181	2.18
UNC13A	0.0058	2.13	0.0040	2.23	0.0018	2.18
LOC245297	0.0286	1.87	0.0032	2.52	0.0040	2.17
SCG3	0.0394	2.31			0.0293	2.17
B930011P16RIK	0.0070	2.14	0.0061	2.18	0.0026	2.16
PRKCB	0.0379	2.34			0.0311	2.16
LOC381125	0.0297	1.88	0.0040	2.48	0.0046	2.16
C130021I20	0.0232	2.29	0.0477	2.02	0.0168	2.15
TTC15	0.0256	2.20	0.0334	2.10	0.0144	2.15
1810006K23RIK			0.0177	2.52	0.0222	2.15
DUSP8			0.0458	2.36	0.0401	2.15
KLK1B22	0.0028	2.43	0.0186	1.90	0.0028	2.15
DPCR1	0.0060	5.52				
SULT4A1			0.0230	2.34	0.0193	2.15
ALOX5AP	0.0053	2.09	0.0034	2.20	0.0016	2.15
FOXQ1	0.0373	3.58				
DCX	0.0436	2.31			0.0353	2.15
EPB4.9			0.0226	2.75	0.0416	2.15
MCF2L			0.0481	2.25	0.0340	2.15
C230071F15RIK	0.0205	1.74	0.0005	2.63	0.0012	2.14
KIF5A			0.0408	2.21	0.0266	2.14
6330409D20RIK	0.0307	2.13	0.0306	2.13	0.0153	2.13
6330500I05RIK	0.0074	2.25	0.0163	2.02	0.0046	2.13
2900011O08RIK			0.0413	2.71		
2900027M19RIK	0.0491	2.02	0.0269	2.24	0.0187	2.13



**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
RAB3A			0.0458	2.17	0.0282	2.12
CXCR4	0.0149	2.54			0.0213	2.12
D230046F09RIK			0.0220	2.41	0.0238	2.12
CHRNA5	0.0005	3.08			0.0033	2.11
D130029J02RIK			0.0342	2.52	0.0468	2.10
FUT8	0.0150	1.92	0.0036	2.30	0.0029	2.10
4930455C21RIK	0.0004	2.29	0.0022	1.92	0.0003	2.10
LOC228777			0.0226	2.81		
4732481H14RIK	0.0152	1.76	0.0006	2.50	0.0011	2.10
LOC332788	0.0231	2.28			0.0197	2.09
D130032J17RIK	0.0172	2.21	0.0349	1.98	0.0118	2.09
DRD2			0.0026	3.00	0.0125	2.09
D630035N04RIK	0.0007	1.65	0.0000	2.64	0.0000	2.09
KCNG4	0.0089	2.05	0.0070	2.11	0.0032	2.08
D130099D04RIK	0.0011	2.02	0.0006	2.14	0.0003	2.08
REM2	0.0091	2.27	0.0313	1.90	0.0076	2.08
1700080P15RIK			0.0060	2.43	0.0082	2.08
SCL000416.1_19	0.0123	2.10	0.0155	2.04	0.0060	2.07
GRB14	0.0136	1.86	0.0021	2.31	0.0020	2.07
D4BWG0951E	0.0189	1.87	0.0038	2.28	0.0034	2.07
UCHL1			0.0276	2.28	0.0261	2.06
GPR83	0.0371	2.16			0.0266	2.05
2900019M05RIK			0.0378	2.25	0.0346	2.05
C630024B01RIK			0.0165	2.29	0.0167	2.05
CELSR3	0.0215	2.21			0.0177	2.04
9030625A11RIK	0.0033	4.04				
CRG-L1	0.0017	2.27	0.0119	1.83	0.0016	2.04
6330416G13RIK			0.0012	3.03	0.0089	2.04
A930004F07RIK	0.0246	2.00	0.0200	2.07	0.0104	2.03
KIF5C	0.0219	2.00	0.0171	2.07	0.0089	2.03
TM4SF3	0.0343	3.95				
GATA6	0.0168	4.84				

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
APBA2BP	0.0466	1.89	0.0183	2.18	0.0144	2.03
BC066028	0.0407	1.91	0.0196	2.14	0.0139	2.03
LZF	0.0001	2.22	0.0011	1.85	0.0001	2.03
C630025L14	0.0366	2.13			0.0260	2.02
1700008B15RIK	0.0268	1.78	0.0037	2.28	0.0041	2.02
CLDN5			0.0422	2.21	0.0385	2.02
FBXL15	0.0223	1.99	0.0189	2.03	0.0096	2.01
STX1A			0.0202	2.16	0.0164	2.01
SGIP1	0.0461	1.79	0.0098	2.24	0.0100	2.00
PARVG	0.0020	2.03	0.0027	1.97	0.0008	2.00
FOXP1	0.0035	2.39			0.0060	2.00
FBLIM1			0.0364	2.13	0.0284	2.00
GRIA2			0.0335	2.51		
C530028O21RIK	0.0035	1.85	0.0007	2.14	0.0005	1.99
NDRG4			0.0203	2.18	0.0183	1.99
3100002J23RIK	0.0424	3.36				
NAPB			0.0366	2.15	0.0312	1.99
A930010C08RIK	0.0143	2.07	0.0265	1.90	0.0090	1.99
LOC268730	0.0183	2.12	0.0447	1.85	0.0141	1.98
TMEM35	0.0085	2.30			0.0114	1.98
A230051N06RIK	0.0040	1.94	0.0027	2.02	0.0012	1.98
SLC8A1	0.0167	1.84	0.0055	2.10	0.0040	1.97
TRPV2			0.0172	2.28	0.0224	1.97
ONECUT2	0.0421	2.07			0.0314	1.97
GNAI1	0.0283	1.84	0.0107	2.09	0.0079	1.96
THSD2	0.0061	2.51			0.0161	1.96
CCL27			0.0272	2.06	0.0192	1.96
PEP4	0.0012	2.26	0.0195	1.69	0.0018	1.95
OPRK1			0.0008	2.63	0.0040	1.95
STMN1			0.0206	2.20	0.0233	1.94
LIMK2B	0.0126	1.87	0.0063	2.02	0.0036	1.94
SOX17	0.0128	3.84				

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
HPCAL4			0.0307	2.77		
1700051I12RIK	0.0301	2.27			0.0422	1.93
C030004M05RIK	0.0084	1.81	0.0024	2.05	0.0017	1.93
ABR	0.0109	2.02	0.0235	1.84	0.0072	1.93
LOC384607	0.0170	2.13			0.0170	1.93
MAPRE2	0.0145	2.02	0.0297	1.84	0.0097	1.92
AS3MT	0.0288	2.01			0.0202	1.92
B830021E24RIK			0.0059	2.33	0.0119	1.91
FGD5	0.0409	1.72	0.0083	2.12	0.0085	1.91
LOC232937	0.0087	1.79	0.0023	2.04	0.0017	1.91
PGCP	0.0497	2.51				
1700093K21RIK			0.0009	2.55	0.0047	1.91
LOC381310			0.0350	2.08	0.0330	1.90
SGNE1			0.0283	2.07	0.0261	1.90
NEDD4B	0.0339	1.79	0.0143	2.01	0.0104	1.90
TTR	0.0032	2.26			0.0061	1.90
SCL000936.1_18	0.0359	1.50	0.0003	2.40	0.0010	1.89
PCDH17	0.0337	2.69				
BNC2			0.0271	2.20	0.0364	1.89
ISL2	0.0122	1.72	0.0018	2.08	0.0018	1.89
2700067E09RIK	0.0415	1.78	0.0181	2.00	0.0134	1.89
DOCK4	0.0084	1.78	0.0026	2.00	0.0017	1.89
2310057J16RIK			0.0164	2.18	0.0221	1.89
CAP1	0.0266	2.09			0.0270	1.89
GHRH			0.0067	2.22	0.0116	1.88
PHLDA1			0.0221	2.14	0.0282	1.87
CACNG2			0.0061	2.23	0.0111	1.87
9630042K08RIK			0.0224	2.08	0.0236	1.87
A1415330	0.0227	1.75	0.0072	2.00	0.0055	1.87
CCKBR			0.0176	2.52		
VSTM2	0.0440	2.54				
SCL0002012.1_0	0.0053	2.07	0.0329	1.68	0.0057	1.86

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
4732456N10RIK	0.0071	2.13			0.0098	1.86
LOC381873	0.0002	2.06	0.0032	1.67	0.0003	1.86
CDS1			0.0246	2.19	0.0370	1.86
DUSP4			0.0099	2.48	0.0330	1.86
PGA5	0.0414	3.05				
2700038N03RIK	0.0079	2.05	0.0461	1.65	0.0088	1.84
ZBTB11	0.0133	1.64	0.0012	2.05	0.0014	1.83
MYL2	0.0033	2.29			0.0098	1.82
LOC381367	0.0052	1.55	0.0001	2.13	0.0002	1.82
SORCS3	0.0293	2.25				
BMP5	0.0080	1.60	0.0004	2.06	0.0006	1.81
D6ERTD538E			0.0372	2.03	0.0422	1.81
B4GALNT2	0.0331	2.63				
SLITRK6			0.0091	2.03	0.0110	1.81
INHBC	0.0001	2.02	0.0025	1.62	0.0002	1.81
TYRP1	0.0069	1.46	0.0000	2.23	0.0001	1.81
RARRES1	0.0187	2.20			0.0362	1.81
5730410E15RIK	0.0497	2.10				
CTSL	0.0228	2.06			0.0317	1.79
FIBCD1			0.0431	2.61		
B230387C07RIK	0.0178	1.51	0.0003	2.11	0.0008	1.79
IGSF4A	0.0248	1.59	0.0023	2.01	0.0030	1.79
FXYD3	0.0255	3.57				
4930589M24RIK			0.0096	2.21	0.0241	1.78
SCL00319622.1_241	0.0264	2.09			0.0426	1.78
LOC280487	0.0351	2.25				
LOC219228	0.0379	2.12				
CSN3	0.0265	2.52				
MTAP4			0.0380	2.02	0.0485	1.77
XPNPEP2	0.0236	2.17			0.0470	1.77
9330181H08RIK	0.0002	2.45			0.0025	1.75
LBH			0.0140	2.04	0.0237	1.75

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
B230219J02RIK	0.0082	2.03			0.0165	1.72
3110012E06RIK			0.0264	2.06		
GPR24			0.0058	2.03	0.0134	1.70
HS3ST1	0.0032	3.25				
D030035F05RIK			0.0107	2.11	0.0316	1.69
GTL2			0.0256	2.08		
2810032G03RIK			0.0257	2.38		
NDG2			0.0452	2.48		
1700030H14RIK			0.0053	2.00	0.0133	1.67
PRG	0.0338	2.38				
2310058A03RIK	0.0148	3.02				
AGPAT4			0.0021	2.02	0.0076	1.65
B930062P21RIK			0.0077	2.14	0.0319	1.65
NMS	0.0076	2.26			0.0441	1.64
IQCF5	0.0031	2.01			0.0109	1.64
ESAM1	0.0416	2.62				
NPTX2	0.0147	2.37				
VAV3	0.0040	2.03			0.0203	1.59
SLC38A5	0.0446	2.20				
9430047F21RIK			0.0442	2.15		
NDRG1			0.0279	2.01		
SLC5A5	0.0459	2.30				
2210413P10RIK	0.0231	2.52				
NXF7	0.0351	2.58				
AV071179	0.0264	2.14				
PEG3	0.0372	2.36				
E330035H20RIK	0.0267	2.11				
EN2			0.0072	2.36		
DLK1			0.0338	2.12		
CYP2F2	0.0314	2.07				
EIF2S3Y	0.0178	-2.01	0.0007	3.16		
1700007K13RIK			0.0200	-2.15		

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
CMTM7			0.0343	-2.01		
A430106G13RIK			0.0152	-2.08		
KREMEN			0.0378	-2.07		
MANSC1			0.0279	-2.04		
MCCC2			0.0078	-2.06		
FATH			0.0187	-2.01		
PPARD			0.0292	-2.02		
GPR177			0.0126	-2.35		
LRDD			0.0247	-2.02		
SLC25A10			0.0235	-2.15		
FZD2			0.0014	-2.23	0.0316	-1.50
2610507B11RIK			0.0014	-2.02	0.0153	-1.52
HOXA7			0.0297	-2.21		
LOC240906			0.0436	-2.20		
SERPINH1			0.0161	-2.05		
ACAA2			0.0366	-2.18		
MYO1E			0.0396	-2.19		
EFEMP2			0.0227	-2.00		
TMEM47			0.0200	-2.20		
ANXA2			0.0481	-3.07		
2210413P12RIK			0.0200	-2.75		
CD164			0.0135	-2.11		
2310016E02RIK			0.0073	-2.08	0.0414	-1.57
2810430P21RIK	0.0240	-2.18				
CKB			0.0001	-2.02	0.0010	-1.58
LRRN1			0.0255	-2.15		
9430001M03RIK			0.0134	-2.01	0.0439	-1.60
RCN3			0.0440	-2.20		
8430438D04RIK			0.0051	-2.04	0.0227	-1.61
S100A13			0.0419	-2.35		
ACP6			0.0442	-2.10		
PPT1			0.0043	-2.16	0.0275	-1.61

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
SRI			0.0073	-2.16	0.0387	-1.62
PLOD2			0.0075	-2.23	0.0461	-1.62
GALK1			0.0435	-2.04		
HYAL1			0.0065	-2.29	0.0474	-1.62
ADAM17			0.0058	-2.01	0.0197	-1.62
4833409N03RIK			0.0332	-2.06		
PHACTR4			0.0014	-2.16	0.0100	-1.64
DPH4			0.0017	-2.08	0.0088	-1.64
1500026D16RIK			0.0059	-2.09	0.0234	-1.64
PAWR			0.0165	-2.37		
TCFE2A			0.0004	-2.05	0.0022	-1.65
TYRO3			0.0079	-2.07	0.0266	-1.65
GRM5			0.0092	-2.04	0.0270	-1.65
ACTN1			0.0349	-2.22		
E430027O22RIK			0.0060	-2.13	0.0254	-1.65
IL18			0.0454	-2.05		
LRP4			0.0280	-2.55		
RAI14			0.0138	-2.09	0.0424	-1.66
2810409M01RIK			0.0234	-2.03		
SLC19A2			0.0142	-2.20		
BAG3			0.0466	-2.65		
FSTL			0.0148	-2.12	0.0457	-1.67
TSKU			0.0052	-2.24	0.0277	-1.67
PPIC			0.0388	-2.53		
AF233884			0.0422	-2.09		
SOAT1			0.0362	-2.18		
DDX46			0.0230	-2.04		
ALDH2			0.0289	-2.19		
FNDC3B			0.0129	-2.47		
HSPA2			0.0348	-2.23		
CACNA1G			0.0118	-2.01	0.0245	-1.69
PLEKHG2			0.0032	-2.09	0.0109	-1.69

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
9630007E23RIK			0.0369	-2.03		
BTD			0.0079	-2.03	0.0184	-1.69
GLO1			0.0021	-2.23	0.0121	-1.69
ABHD4			0.0052	-2.03	0.0127	-1.69
GPRC5B			0.0105	-2.20	0.0375	-1.70
H2AFJ			0.0193	-2.11	0.0482	-1.70
FLNB			0.0150	-2.14	0.0420	-1.70
GM114			0.0007	-2.11	0.0031	-1.70
SDH1			0.0471	-2.06		
SFRP2			0.0313	-2.25		
SPG20			0.0233	-2.06	0.0461	-1.71
CP			0.0241	-2.01	0.0408	-1.71
CPNE2			0.0218	-2.18		
RHOG			0.0275	-2.04	0.0477	-1.72
HEPH			0.0367	-2.09		
A630086H07RIK			0.0049	-2.09	0.0124	-1.72
EG433923			0.0333	-2.10		
BB128963			0.0082	-2.54		
D15ERTD366E			0.0436	-2.02		
9530051K01RIK			0.0070	-2.37	0.0347	-1.73
SPR			0.0065	-2.25	0.0243	-1.73
BC062951			0.0159	-2.09	0.0328	-1.73
KDELC1			0.0011	-2.19	0.0047	-1.74
C530028I08RIK			0.0151	-2.01	0.0231	-1.74
EGR3			0.0119	-2.11	0.0265	-1.74
D030041G07RIK			0.0464	-2.35		
1810045K06RIK			0.0374	-2.12		
5031439A09RIK			0.0029	-2.79	0.0377	-1.74
PHCA			0.0085	-2.12	0.0197	-1.75
1700113I22RIK			0.0060	-2.26	0.0219	-1.75
CTDSP2			0.0144	-2.03	0.0230	-1.75
1200008N06RIK			0.0047	-2.25	0.0175	-1.75



**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
D330024H06RIK			0.0234	-2.55		
RALGPS2			0.0050	-2.01	0.0078	-1.75
40430			0.0019	-2.13	0.0054	-1.75
TM4SF12			0.0005	-2.37	0.0041	-1.76
2810008M24RIK			0.0002	-2.46	0.0027	-1.76
SMTN			0.0288	-2.17		
1200003E16RIK			0.0277	-2.37		
ALDH4A1			0.0021	-2.54	0.0167	-1.77
SLC2A10			0.0119	-2.02	0.0164	-1.77
C730013O11RIK			0.0051	-2.33	0.0203	-1.77
3230401I01RIK			0.0070	-2.06	0.0116	-1.77
LOC381219			0.0076	-2.06	0.0121	-1.78
TPCN2			0.0010	-2.54	0.0096	-1.78
4921528G01RIK			0.0047	-2.04	0.0072	-1.78
4632408A20RIK			0.0077	-2.04	0.0112	-1.78
MTBP			0.0095	-2.03	0.0131	-1.78
TMOD3			0.0120	-2.37	0.0409	-1.78
FGFR2			0.0368	-2.72		
LOC230872			0.0240	-2.17	0.0458	-1.78
9130211I03RIK			0.0086	-2.08	0.0142	-1.79
MYBBP1A			0.0176	-2.01	0.0217	-1.79
PRDX4			0.0118	-2.28	0.0324	-1.79
CTDSP1			0.0012	-2.21	0.0037	-1.79
D130040H23RIK	0.0314	-1.56	0.0018	-2.06	0.0030	-1.79
VIL2			0.0047	-2.55	0.0284	-1.79
6030429G01RIK			0.0181	-2.69		
PLAT			0.0156	-2.65		
SLC4A4	0.0191	-1.58	0.0013	-2.03	0.0018	-1.79
4930422G04RIK			0.0131	-2.14	0.0243	-1.79
2310005E10RIK			0.0320	-2.42		
RPA1			0.0127	-2.54		
D430028G21RIK			0.0014	-2.35	0.0066	-1.80

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
BC014795			0.0406	-2.31		
A630034E16RIK			0.0287	-2.09	0.0407	-1.80
CHEK2			0.0354	-2.08	0.0479	-1.80
PBXIP1			0.0115	-2.87		
3110004L20RIK	0.0127	-1.57	0.0005	-2.07	0.0009	-1.80
MYO6	0.0359	-1.60	0.0041	-2.02	0.0052	-1.80
SIX5			0.0143	-2.37	0.0437	-1.80
SCL000981.1_40			0.0138	-2.68		
DTYMK			0.0276	-2.12	0.0426	-1.80
S100A1			0.0398	-3.00		
TACC1			0.0024	-2.15	0.0053	-1.80
SCL0003476.1_2802			0.0078	-2.12	0.0133	-1.81
BC017643			0.0451	-2.00	0.0484	-1.81
PLEKHA7			0.0114	-2.00	0.0124	-1.81
MRPS12			0.0242	-2.11	0.0354	-1.81
CCDC58			0.0235	-2.10	0.0339	-1.81
D230048P18RIK			0.0041	-2.40	0.0169	-1.81
PEX11A			0.0057	-2.17	0.0117	-1.81
EPHB4			0.0438	-2.40		
NEDD1			0.0094	-2.48	0.0373	-1.82
ODC1			0.0396	-2.17		
A630055A13RIK			0.0392	-2.10		
GYG1	0.0476	-1.52	0.0015	-2.18	0.0034	-1.82
SLC30A7			0.0088	-2.12	0.0142	-1.82
AK3			0.0003	-2.36	0.0018	-1.82
SUCLG2			0.0401	-2.31		
1300006C19RIK			0.0114	-2.07	0.0147	-1.83
PPOX	0.0354	-1.59	0.0026	-2.10	0.0039	-1.83
2310008H04RIK			0.0095	-2.16	0.0162	-1.83
A330080J22RIK			0.0020	-2.34	0.0074	-1.83
LOC230765			0.0486	-2.21		
GDPD2			0.0267	-2.77		

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
SLC27A1			0.0333	-2.00	0.0320	-1.84
HIP-1			0.0077	-2.26	0.0174	-1.84
1110055E19RIK			0.0211	-3.14		
ZFP236	0.0470	-1.62	0.0053	-2.09	0.0071	-1.84
PELI2	0.0170	-1.59	0.0007	-2.14	0.0012	-1.84
SWAP70			0.0093	-2.31	0.0232	-1.84
RNF130	0.0304	-1.64	0.0038	-2.07	0.0045	-1.84
HIP1	0.0147	-1.50	0.0001	-2.27	0.0003	-1.84
3002006F17RIK			0.0099	-2.05	0.0108	-1.85
SKAP2			0.0183	-2.59		
CSPG5	0.0314	-2.01			0.0292	-1.85
XRCC3			0.0425	-2.03	0.0426	-1.85
1700093E07RIK			0.0179	-2.02	0.0169	-1.85
ABCD3	0.0234	-1.57	0.0007	-2.18	0.0015	-1.85
6.33051E+19	0.0414	-2.11				
JAM2	0.0438	-1.46	0.0003	-2.36	0.0011	-1.86
DPP8			0.0042	-2.20	0.0076	-1.86
EPB4.1L2			0.0455	-2.04	0.0454	-1.86
LOC385461			0.0369	-2.35		
CCND3			0.0262	-2.33		
LOC271490			0.0144	-2.08	0.0158	-1.86
PROM			0.0129	-3.23		
C130021K03RIK	0.0224	-2.14			0.0291	-1.87
PLEKHC1			0.0073	-2.18	0.0114	-1.87
CDKN2C	0.0085	-1.56	0.0001	-2.24	0.0003	-1.87
IFITM3			0.0319	-3.09		
MLF1			0.0040	-2.79	0.0278	-1.87
5930431H10			0.0006	-2.45	0.0030	-1.87
RPO1-2			0.0221	-2.14	0.0277	-1.87
4631422C13RIK	0.0462	-1.71	0.0116	-2.06	0.0110	-1.88
CAR14			0.0354	-2.56		
RAB32			0.0279	-2.82		

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
2010005O13RIK			0.0095	-2.56	0.0343	-1.88
MSN			0.0037	-2.34	0.0094	-1.88
EGFL3			0.0134	-2.22	0.0206	-1.89
SELENBP2			0.0116	-2.43	0.0301	-1.89
E2F5			0.0022	-2.38	0.0064	-1.89
LIMD1	0.0172	-1.65	0.0011	-2.17	0.0016	-1.89
FHOD1			0.0423	-2.79		
FOS			0.0325	-2.35		
EHD3			0.0175	-2.11	0.0184	-1.90
D1ERTD471E			0.0099	-3.03		
LRIG3			0.0307	-2.78		
SULF1			0.0075	-3.06		
RNASE1			0.0248	-2.07	0.0222	-1.90
ZFP36			0.0439	-2.53		
B2M			0.0112	-3.10		
PDK3			0.0056	-2.64	0.0241	-1.90
2610207P08RIK			0.0105	-2.56	0.0334	-1.91
PPIH			0.0310	-2.30	0.0489	-1.91
5930412E23RIK	0.0214	-1.69	0.0022	-2.16	0.0027	-1.91
MIF4GD			0.0237	-2.52		
TMEM20			0.0229	-2.52		
SRCASM			0.0168	-2.36	0.0328	-1.91
VRK1			0.0157	-2.09	0.0146	-1.91
RBL1	0.0101	-1.68	0.0007	-2.18	0.0009	-1.91
D4WSU114E			0.0444	-2.15	0.0482	-1.92
4631426J05RIK			0.0206	-2.67		
POU3F3	0.0002	-2.22	0.0048	-1.66	0.0003	-1.92
E430027N06RIK			0.0416	-2.31		
CDH6	0.0098	-1.61	0.0002	-2.30	0.0004	-1.92
RPA2			0.0363	-2.14	0.0376	-1.92
9330171D12RIK	0.0255	-1.82	0.0103	-2.04	0.0073	-1.93
CENPF	0.0110	-1.84	0.0049	-2.02	0.0029	-1.93

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
NEDD9			0.0150	-2.96		
BC040774	0.0275	-2.18			0.0306	-1.93
PRPS2			0.0239	-2.31	0.0361	-1.94
SDF2L1			0.0111	-2.63	0.0354	-1.94
4632417D23			0.0422	-2.04	0.0316	-1.94
C130034I18RIK			0.0052	-2.29	0.0085	-1.94
WWC1	0.0120	-1.81	0.0034	-2.08	0.0025	-1.94
BCL2	0.0053	-1.73	0.0004	-2.18	0.0005	-1.94
ATM			0.0285	-2.09	0.0233	-1.95
2310006M14RIK	0.0411	-1.74	0.0072	-2.18	0.0078	-1.95
2610510J17RIK			0.0388	-2.39		
D11ERTD759E			0.0020	-2.86	0.0136	-1.95
ATP1B2			0.0432	-2.06	0.0325	-1.95
VRK2	0.0450	-1.80	0.0146	-2.12	0.0124	-1.95
ZFP101			0.0140	-2.15	0.0133	-1.96
FEN1			0.0382	-2.30		
ZFP160			0.0045	-2.33	0.0077	-1.96
5830411K21RIK			0.0049	-2.55	0.0143	-1.96
LOC237877			0.0121	-2.18	0.0125	-1.96
4831422N07RIK	0.0457	-1.88	0.0258	-2.05	0.0174	-1.96
CYP7B1	0.0474	-1.79	0.0128	-2.15	0.0119	-1.96
2010204O13RIK	0.0177	-2.10	0.0444	-1.84	0.0138	-1.96
2900016B01RIK	0.0297	-2.02	0.0419	-1.91	0.0180	-1.96
BTBD14A			0.0263	-2.22	0.0287	-1.97
3830430K15RIK			0.0439	-2.50		
DNAIC1	0.0063	-1.86	0.0022	-2.08	0.0014	-1.97
LOC382182			0.0262	-2.09	0.0200	-1.97
CEECAM1			0.0086	-2.39	0.0157	-1.97
TTF2			0.0370	-2.32	0.0497	-1.97
SCL000490.1_983			0.0052	-2.58	0.0153	-1.97
C130071C03RIK			0.0017	-2.48	0.0046	-1.98
D11ERTD18E			0.0022	-2.40	0.0045	-1.98

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
9530065M15RIK	0.0246	-1.86	0.0093	-2.10	0.0067	-1.98
SCL0070954.1_214	0.0164	-1.85	0.0053	-2.11	0.0038	-1.98
5730466H23RIK			0.0247	-2.24	0.0279	-1.98
PROS1			0.0055	-3.04	0.0337	-1.98
ZCCHC3	0.0468	-2.08			0.0340	-1.98
DNMBP	0.0026	-1.94	0.0016	-2.03	0.0007	-1.98
GPSM2	0.0092	-1.65	0.0002	-2.38	0.0004	-1.98
ADD3			0.0121	-2.67	0.0350	-1.98
TM4SF11	0.0330	-1.93	0.0219	-2.05	0.0131	-1.99
EGR2			0.0182	-2.45	0.0324	-1.99
MBOAT2	0.0305	-1.95	0.0230	-2.03	0.0128	-1.99
SLC2A13			0.0456	-2.28		
AMPD3			0.0461	-2.13	0.0370	-1.99
WASPIP			0.0065	-3.03	0.0357	-1.99
ZFYVE21			0.0121	-2.67	0.0341	-1.99
1810037I17RIK			0.0022	-2.62	0.0073	-2.00
LBR			0.0318	-2.26	0.0348	-2.00
E130301L11RIK	0.0008	-2.17	0.0044	-1.84	0.0006	-2.00
SCL0003300.1_40	0.0474	-1.74	0.0064	-2.29	0.0080	-2.00
C130091E20			0.0099	-2.43	0.0172	-2.00
BC063749			0.0023	-2.52	0.0060	-2.00
PRODH			0.0017	-2.46	0.0038	-2.00
C430002D13RIK			0.0056	-2.34	0.0081	-2.00
6720469N11RIK			0.0181	-2.61	0.0415	-2.00
C230069K22RIK	0.0213	-1.76	0.0023	-2.28	0.0028	-2.00
ZFP367	0.0238	-1.90	0.0111	-2.11	0.0073	-2.00
NPAS3	0.0149	-1.82	0.0027	-2.21	0.0025	-2.00
ZFP238	0.0025	-1.71	0.0001	-2.35	0.0001	-2.00
1600002H07RIK			0.0460	-2.18	0.0406	-2.00
PPM1M			0.0311	-2.42	0.0461	-2.01
MBLDC1			0.0364	-2.14	0.0285	-2.01
D130027K14RIK			0.0364	-2.07	0.0227	-2.01

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
LOH11CR2A			0.0062	-3.24	0.0428	-2.01
D330012P07RIK			0.0388	-2.17	0.0326	-2.01
AA175286			0.0237	-3.17		
A930025J12RIK	0.0213	-1.83	0.0044	-2.23	0.0040	-2.02
NFI-X3			0.0365	-2.58		
GGTA1			0.0031	-2.55	0.0075	-2.02
PPAN	0.0473	-1.94	0.0280	-2.11	0.0187	-2.02
LOC383897			0.0308	-2.52		
CDC25B	0.0125	-1.72	0.0005	-2.38	0.0009	-2.03
IVD			0.0016	-2.64	0.0052	-2.03
D330040L23RIK	0.0494	-1.94	0.0294	-2.12	0.0197	-2.03
D16ERTD472E			0.0232	-2.48	0.0373	-2.03
AU040950			0.0082	-2.44	0.0131	-2.03
TYMS			0.0315	-2.60		
D130057F13RIK	0.0159	-2.12	0.0251	-1.98	0.0093	-2.05
1700019D03RIK	0.0341	-2.49				
CENPL	0.0481	-1.81	0.0090	-2.32	0.0098	-2.05
LOC382020	0.0191	-1.70	0.0006	-2.48	0.0012	-2.05
E030019D07RIK	0.0471	-1.86	0.0130	-2.27	0.0119	-2.05
E130307J07RIK			0.0027	-3.22	0.0203	-2.06
1700029J07RIK	0.0263	-2.02	0.0206	-2.10	0.0110	-2.06
CENPI	0.0411	-1.89	0.0133	-2.24	0.0112	-2.06
ZIC4	0.0058	-2.11	0.0085	-2.01	0.0028	-2.06
1810014L12RIK			0.0340	-2.40	0.0417	-2.06
OLFML3			0.0383	-3.69		
MC5R	0.0028	-2.23	0.0106	-1.91	0.0021	-2.06
RAD51AP1	0.0486	-1.96	0.0258	-2.18	0.0181	-2.06
0610009M14RIK			0.0067	-2.62	0.0144	-2.07
SMO			0.0008	-2.81	0.0035	-2.07
TENS1			0.0464	-2.39		
FABP7			0.0150	-2.47	0.0216	-2.07
MEIS1	0.0347	-1.84	0.0062	-2.33	0.0065	-2.07

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
C130022M03RIK			0.0329	-2.15	0.0216	-2.07
TUBD1	0.0242	-1.62	0.0002	-2.66	0.0007	-2.07
SCL000408.1_6			0.0354	-2.97		
PLD2			0.0033	-2.86	0.0124	-2.08
9830002L24RIK			0.0361	-2.27	0.0317	-2.08
DCTD			0.0419	-2.23	0.0329	-2.08
6330562C20RIK	0.0428	-1.90	0.0133	-2.28	0.0114	-2.08
2610300B10RIK	0.0374	-1.90	0.0107	-2.29	0.0093	-2.08
MT1			0.0470	-3.45		
BHLHB2			0.0243	-2.26	0.0202	-2.09
LAMB2			0.0307	-3.10		
2310045L10RIK			0.0090	-2.97	0.0316	-2.09
MFGE8			0.0167	-3.34		
CD9			0.0242	-3.82		
C030037D09RIK	0.0197	-2.08	0.0170	-2.12	0.0084	-2.10
2310033F14RIK			0.0082	-3.70		
LOC242915			0.0005	-3.06	0.0033	-2.10
TMIE	0.0086	-2.36	0.0407	-1.87	0.0086	-2.10
GRP58			0.0012	-2.77	0.0039	-2.10
MDK			0.0400	-2.68		
RPL30			0.0356	-2.47	0.0443	-2.10
TNS	0.0047	-1.83	0.0003	-2.41	0.0004	-2.10
FRAG1	0.0399	-1.94	0.0138	-2.28	0.0112	-2.10
2500002A22RIK			0.0385	-2.53		
CENPH			0.0201	-2.39	0.0213	-2.11
C920004C08RIK			0.0046	-2.58	0.0084	-2.11
DSN1			0.0044	-2.62	0.0087	-2.11
6820428D13	0.0355	-2.10	0.0331	-2.12	0.0174	-2.11
LOC329698			0.0238	-2.33	0.0215	-2.11
2610039C10RIK			0.0290	-2.24	0.0209	-2.11
6230416J20RIK			0.0270	-2.37	0.0268	-2.11
4930547N16RIK	0.0441	-2.02	0.0258	-2.21	0.0171	-2.11



**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
NKX2-9			0.0463	-2.15	0.0274	-2.11
PKM2			0.0415	-2.58		
3110021A11RIK			0.0389	-2.24	0.0290	-2.11
RAB7L1			0.0151	-2.96	0.0436	-2.11
EPHA3	0.0301	-1.76	0.0016	-2.54	0.0027	-2.12
ECT2			0.0039	-2.56	0.0066	-2.12
RPS3A			0.0494	-2.25	0.0377	-2.12
A1854517	0.0075	-2.09	0.0061	-2.15	0.0027	-2.12
2810418N01RIK			0.0398	-2.32	0.0349	-2.12
BC025462			0.0177	-2.57	0.0266	-2.12
BC065123	0.0314	-1.58	0.0001	-2.86	0.0006	-2.12
HDAC1			0.0080	-2.82	0.0203	-2.13
TCF7L2			0.0009	-2.79	0.0028	-2.13
LOC545056			0.0353	-2.29	0.0276	-2.13
A830029A02RIK			0.0453	-2.20	0.0288	-2.13
P4HA3			0.0058	-3.17	0.0258	-2.13
1110029I05RIK			0.0045	-2.62	0.0080	-2.14
VIM			0.0065	-2.86	0.0178	-2.14
A1851464			0.0158	-2.42	0.0162	-2.14
8430436L14RIK			0.0081	-3.34	0.0393	-2.14
C730046C01RIK			0.0183	-2.65	0.0296	-2.15
2310034L04RIK	0.0004	-2.05	0.0001	-2.25	0.0001	-2.15
5830411K18RIK			0.0299	-2.63	0.0443	-2.15
B230343A10RIK	0.0040	-2.33	0.0138	-1.98	0.0030	-2.15
B130015M16RIK			0.0063	-2.70	0.0124	-2.15
A830039N02RIK	0.0380	-2.24			0.0249	-2.15
MCM7			0.0305	-2.43	0.0307	-2.15
RFX4			0.0039	-3.23	0.0195	-2.16
LOC381140			0.0310	-2.29	0.0226	-2.16
6430402L23RIK			0.0299	-2.49	0.0341	-2.16
SOLT			0.0170	-2.52	0.0209	-2.16
LOC330668	0.0037	-2.40	0.0180	-1.95	0.0033	-2.16

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
C230067O06RIK			0.0117	-2.76	0.0231	-2.16
NME4			0.0384	-2.45	0.0397	-2.16
TLCD1			0.0055	-2.72	0.0108	-2.16
B3GALT6			0.0193	-2.36	0.0160	-2.16
TITF1	0.0243	-2.42			0.0232	-2.17
MRG1			0.0086	-2.51	0.0103	-2.17
NXT2	0.0169	-1.80	0.0007	-2.61	0.0012	-2.17
A130038J17RIK	0.0185	-2.19	0.0216	-2.14	0.0092	-2.17
PON2			0.0036	-3.31	0.0196	-2.17
LOC382063	0.0229	-1.73	0.0005	-2.72	0.0011	-2.17
DHRX	0.0452	-1.95	0.0116	-2.43	0.0109	-2.17
ZRANB3			0.0115	-2.56	0.0148	-2.17
SNAP23			0.0063	-3.01	0.0195	-2.17
SCL0002624.1_576	0.0075	-1.82	0.0003	-2.60	0.0004	-2.18
TMC7	0.0134	-2.16	0.0117	-2.20	0.0054	-2.18
SCL0002786.1_3			0.0163	-3.07	0.0447	-2.18
2310058J06RIK			0.0021	-2.85	0.0057	-2.18
2810459M11RIK			0.0121	-2.47	0.0124	-2.18
7330410H16RIK			0.0109	-2.50	0.0122	-2.18
SEPP1			0.0054	-2.78	0.0112	-2.18
SIVA			0.0170	-2.86	0.0346	-2.19
SLC6A1	0.0087	-2.07	0.0037	-2.31	0.0022	-2.19
AA968343	0.0080	-1.78	0.0001	-2.71	0.0003	-2.20
AU020206	0.0476	-2.01	0.0162	-2.42	0.0136	-2.20
LOC381415	0.0176	-2.48			0.0171	-2.20
CYP2J9	0.0032	-2.05	0.0008	-2.38	0.0005	-2.21
LOC432879	0.0358	-1.95	0.0070	-2.50	0.0071	-2.21
RHBDF1			0.0077	-2.73	0.0130	-2.21
4833427B12RIK			0.0355	-2.84		
MPP6	0.0222	-2.08	0.0099	-2.35	0.0066	-2.21
LHFP	0.0388	-1.93	0.0065	-2.54	0.0072	-2.21
LITAF			0.0402	-2.48	0.0384	-2.21

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
4632417K18RIK			0.0154	-3.36		
F730047E07RIK			0.0284	-2.61	0.0342	-2.22
A630064P09RIK	0.0449	-2.22	0.0448	-2.22	0.0239	-2.22
IPAS			0.0429	-2.80		
VAX1	0.0026	-2.14	0.0013	-2.31	0.0006	-2.22
ASF1B			0.0360	-2.60	0.0411	-2.23
MAPKAPK3			0.0431	-2.66		
1190028F09			0.0222	-2.64	0.0276	-2.23
CCNE2			0.0285	-2.48	0.0256	-2.24
EPPK1	0.0048	-2.24	0.0049	-2.24	0.0018	-2.24
E030019B13RIK	0.0043	-2.51	0.0216	-2.00	0.0040	-2.24
OAT			0.0116	-2.88	0.0223	-2.24
RBBP9	0.0338	-1.87	0.0026	-2.69	0.0039	-2.24
POLA2			0.0247	-2.49	0.0223	-2.24
D14ERTD449E			0.0224	-2.88	0.0393	-2.24
SELENBP1			0.0080	-3.24	0.0267	-2.25
HES6	0.0145	-2.08	0.0049	-2.42	0.0034	-2.25
PHXR4			0.0112	-3.23	0.0345	-2.25
NDC80	0.0188	-2.10	0.0074	-2.41	0.0050	-2.25
EVI5	0.0104	-1.85	0.0003	-2.73	0.0006	-2.25
D130063H01RIK			0.0089	-2.99	0.0206	-2.25
RGS16	0.0392	-2.26	0.0408	-2.24	0.0208	-2.25
C230093N12RIK			0.0016	-3.05	0.0051	-2.25
TRIP6			0.0062	-3.03	0.0158	-2.25
BC032967			0.0017	-3.08	0.0055	-2.26
NPY	0.0124	-2.54	0.0484	-2.01	0.0118	-2.26
2310057H16RIK			0.0436	-3.28		
3010031K01RIK	0.0380	-2.05	0.0115	-2.50	0.0098	-2.26
DOCK10	0.0094	-1.98	0.0011	-2.58	0.0011	-2.26
SGOL1	0.0487	-2.02	0.0132	-2.54	0.0123	-2.27
D630016K15RIK	0.0068	-2.18	0.0037	-2.36	0.0019	-2.27
COL16A1			0.0184	-2.80	0.0278	-2.27

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
PTCH1	0.0248	-2.16	0.0133	-2.39	0.0083	-2.27
4932415G12RIK	0.0009	-2.28	0.0010	-2.26	0.0003	-2.27
CCHCR1			0.0265	-3.31		
SPARC			0.0178	-5.17		
RASL12			0.0312	-2.65	0.0349	-2.27
1600014C23RIK			0.0070	-2.84	0.0122	-2.27
2810423O19RIK			0.0261	-2.82	0.0384	-2.28
TGIF2	0.0046	-1.96	0.0003	-2.64	0.0004	-2.28
A130029H05RIK			0.0080	-2.93	0.0158	-2.28
NCAPD2			0.0099	-2.65	0.0114	-2.28
1110067L22RIK	0.0440	-2.32			0.0253	-2.28
HSPG2			0.0295	-3.43		
D2ERTD435E	0.0477	-2.16	0.0266	-2.42	0.0182	-2.29
1700041B20RIK			0.0061	-2.88	0.0111	-2.29
AU040576	0.0431	-2.10	0.0164	-2.50	0.0130	-2.29
E2F1			0.0110	-2.90	0.0189	-2.30
4933436C20RIK			0.0016	-3.37	0.0077	-2.30
EGLN3			0.0071	-3.50	0.0285	-2.30
9330140K16RIK			0.0076	-2.81	0.0114	-2.30
FSTL1			0.0137	-3.13	0.0313	-2.30
BC037006	0.0043	-2.06	0.0006	-2.58	0.0005	-2.30
GABT4	0.0279	-2.45			0.0197	-2.31
2610524A10RIK			0.0045	-3.30	0.0154	-2.31
CNP1			0.0178	-2.60	0.0165	-2.31
LOC383946	0.0227	-2.08	0.0057	-2.57	0.0048	-2.31
9830169E20RIK			0.0059	-2.98	0.0117	-2.32
TRIM56			0.0028	-2.92	0.0052	-2.33
CX3CL1			0.0153	-2.64	0.0147	-2.33
GNG12	0.0177	-2.11	0.0045	-2.59	0.0036	-2.34
1810057P16RIK	0.0276	-2.58			0.0233	-2.34
PTER			0.0135	-3.26	0.0331	-2.34
FOXG1	0.0410	-2.46			0.0279	-2.34

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
PMF1	0.0459	-1.99	0.0063	-2.77	0.0077	-2.35
ENTPD2	0.0323	-2.24	0.0199	-2.45	0.0122	-2.35
NDRG2	0.0251	-2.28	0.0185	-2.41	0.0101	-2.35
STK17B	0.0451	-1.82	0.0013	-3.05	0.0030	-2.35
D930014G18RIK	0.0048	-2.18	0.0014	-2.55	0.0009	-2.36
TRIM47			0.0182	-2.70	0.0186	-2.36
LOC269515			0.0351	-2.64	0.0320	-2.36
RAD51			0.0446	-2.69	0.0442	-2.36
MNS1			0.0093	-4.85		
9330171B01RIK			0.0404	-2.60	0.0343	-2.37
COL23A1			0.0418	-2.65	0.0382	-2.37
GRID2	0.0298	-2.17	0.0109	-2.58	0.0082	-2.37
9430091F09RIK			0.0412	-2.56	0.0322	-2.37
SKP2			0.0094	-2.91	0.0136	-2.37
BMPR1B	0.0013	-2.28	0.0007	-2.47	0.0003	-2.37
ARHGAP12	0.0030	-2.55	0.0083	-2.21	0.0019	-2.37
PTBP1			0.0029	-3.10	0.0063	-2.38
C86302			0.0056	-2.93	0.0086	-2.38
40429			0.0055	-3.13	0.0120	-2.38
EVC2			0.0105	-3.06	0.0191	-2.38
D17H6S56E-5	0.0094	-2.16	0.0022	-2.63	0.0017	-2.38
AXL			0.0279	-3.73		
GALNT10	0.0458	-1.87	0.0019	-3.04	0.0039	-2.39
5830476B15RIK	0.0043	-2.22	0.0013	-2.58	0.0008	-2.39
2310022K01RIK	0.0268	-2.15	0.0073	-2.67	0.0061	-2.40
GJA1			0.0126	-4.75		
POLE			0.0288	-2.56	0.0203	-2.40
6430503K07RIK	0.0003	-2.51	0.0007	-2.30	0.0001	-2.40
TYMS-PS			0.0206	-3.37	0.0466	-2.40
C330011F01RIK	0.0352	-2.15	0.0096	-2.69	0.0084	-2.40
GSTM1			0.0137	-2.98	0.0201	-2.41
HIST1H2AO			0.0176	-2.69	0.0156	-2.41

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
ANTXR1	0.0497	-1.93	0.0035	-3.00	0.0057	-2.41
MXD3	0.0115	-2.29	0.0060	-2.53	0.0034	-2.41
LOC381336	0.0396	-1.85	0.0010	-3.14	0.0025	-2.41
SMOC1			0.0115	-3.24	0.0243	-2.41
BC048355			0.0121	-3.01	0.0184	-2.41
MMP14			0.0035	-3.54	0.0128	-2.41
SCL0002775.1_4	0.0452	-1.86	0.0014	-3.15	0.0031	-2.42
GADD45G	0.0145	-2.01	0.0009	-2.93	0.0012	-2.43
MCM4			0.0138	-3.08	0.0222	-2.43
4930427A07RIK			0.0420	-2.64	0.0332	-2.43
KDELR3			0.0162	-4.68		
AGTRAP	0.0331	-1.83	0.0005	-3.23	0.0015	-2.43
HIST1H2AI			0.0211	-2.71	0.0182	-2.43
CDC45L			0.0226	-2.85	0.0249	-2.43
POP4	0.0034	-2.30	0.0013	-2.58	0.0007	-2.44
LOC384158	0.0249	-2.32	0.0138	-2.57	0.0085	-2.44
IRX2			0.0017	-3.94	0.0106	-2.44
PLEKHK1	0.0080	-2.21	0.0018	-2.70	0.0014	-2.45
9930108O06RIK			0.0173	-3.16	0.0290	-2.45
MSI1H	0.0040	-2.21	0.0008	-2.71	0.0006	-2.45
CENTD1			0.0027	-3.24	0.0063	-2.45
IGFBP5			0.0098	-3.51	0.0268	-2.45
TMEM25	0.0269	-2.36	0.0181	-2.54	0.0104	-2.45
2810417K24RIK			0.0404	-2.69	0.0330	-2.45
6720460F02RIK	0.0069	-2.20	0.0013	-2.74	0.0011	-2.46
TACR1			0.0045	-3.61	0.0154	-2.46
PGPEP1	0.0023	-2.11	0.0002	-2.87	0.0002	-2.46
ADAMTSL1	0.0240	-2.33	0.0129	-2.60	0.0080	-2.46
A230052G08RIK	0.0207	-1.98	0.0009	-3.07	0.0015	-2.46
MEST			0.0084	-3.49	0.0223	-2.46
OLIG2	0.0371	-2.24	0.0136	-2.71	0.0106	-2.46
GSG2			0.0269	-2.93	0.0309	-2.47

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
9430041J12RIK	0.0069	-2.28	0.0022	-2.67	0.0014	-2.47
A730008H23	0.0066	-2.36	0.0035	-2.59	0.0018	-2.47
GM644			0.0326	-2.77	0.0286	-2.48
1700016J18RIK	0.0406	-2.39	0.0282	-2.58	0.0171	-2.48
LOC386091			0.0008	-3.45	0.0026	-2.48
IRX5			0.0068	-3.54	0.0190	-2.48
HMGB2	0.0470	-2.12	0.0085	-2.91	0.0093	-2.49
HIST2H2AA2			0.0209	-2.81	0.0191	-2.49
AI449441	0.0069	-2.44	0.0052	-2.54	0.0023	-2.49
TNFAIP8			0.0146	-3.52	0.0340	-2.49
MTAP			0.0109	-3.22	0.0186	-2.50
ZFPM2	0.0037	-2.50	0.0037	-2.50	0.0014	-2.50
GLTP			0.0143	-2.86	0.0137	-2.50
PLCE1	0.0005	-2.33	0.0001	-2.68	0.0001	-2.50
TCF3			0.0285	-2.98	0.0326	-2.50
TMPRSS5	0.0069	-2.29	0.0019	-2.74	0.0013	-2.50
KCND2	0.0137	-2.83	0.0471	-2.22	0.0123	-2.51
4930426D05RIK	0.0349	-2.79			0.0302	-2.51
EME2	0.0295	-2.21	0.0069	-2.85	0.0063	-2.51
USP1	0.0303	-2.09	0.0031	-3.02	0.0040	-2.51
HN1L			0.0142	-2.97	0.0161	-2.51
NFIX			0.0336	-3.30		
NFIB	0.0366	-1.92	0.0010	-3.30	0.0023	-2.52
SCL0001849.1_2273	0.0238	-2.70	0.0465	-2.35	0.0168	-2.52
BC023928			0.0298	-3.42		
CTSC	0.0008	-2.55	0.0010	-2.49	0.0003	-2.52
HIST1H2AF			0.0240	-2.83	0.0213	-2.52
6720426B09RIK	0.0146	-2.34	0.0058	-2.72	0.0038	-2.52
DEPDC1B	0.0455	-2.25	0.0138	-2.85	0.0121	-2.53
CHX10	0.0377	-2.47	0.0293	-2.61	0.0168	-2.54
RAMP1			0.0284	-3.83		
BRIP1	0.0166	-2.21	0.0027	-2.92	0.0027	-2.54

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
COL5A1			0.0223	-3.98		
SPATA13	0.0142	-2.00	0.0004	-3.23	0.0008	-2.54
RPL29	0.0493	-2.43	0.0325	-2.66	0.0209	-2.54
FGFRL1			0.0011	-3.62	0.0037	-2.54
BC030477	0.0255	-2.64	0.0359	-2.46	0.0150	-2.55
NFIA	0.0309	-1.92	0.0006	-3.38	0.0016	-2.55
TK1			0.0378	-2.85	0.0330	-2.55
CKLFSF5	0.0137	-2.65	0.0205	-2.46	0.0076	-2.55
SCL0001708.1_442	0.0330	-1.97	0.0011	-3.31	0.0023	-2.55
PIPOX	0.0010	-2.38	0.0003	-2.74	0.0002	-2.55
MTHFD1			0.0151	-3.22	0.0223	-2.55
CLSPN	0.0471	-2.23	0.0119	-2.92	0.0113	-2.55
CKAP2			0.0057	-3.44	0.0124	-2.56
SLC38A3	0.0109	-2.65	0.0160	-2.47	0.0057	-2.56
HIST2H2AC	0.0498	-2.27	0.0155	-2.89	0.0137	-2.56
ST5			0.0014	-3.69	0.0050	-2.56
6720422M22RIK			0.0486	-2.60	0.0278	-2.57
2610035D17RIK	0.0011	-3.19	0.0191	-2.08	0.0016	-2.58
BCKDHB	0.0453	-2.35	0.0190	-2.82	0.0145	-2.58
C030034J23RIK			0.0248	-3.14	0.0307	-2.58
AHCY			0.0494	-2.83	0.0408	-2.58
DDIT4L	0.0339	-2.07	0.0023	-3.22	0.0036	-2.58
2610036L11RIK			0.0194	-3.09	0.0224	-2.58
YAP1			0.0061	-4.01	0.0224	-2.59
CBS	0.0201	-2.51	0.0147	-2.66	0.0078	-2.59
SFRS16	0.0362	-2.48	0.0237	-2.71	0.0145	-2.59
MELK			0.0090	-3.11	0.0108	-2.59
ZFP235	0.0385	-2.64	0.0435	-2.57	0.0214	-2.60
LHX5	0.0397	-3.31				
TEAD2			0.0021	-3.84	0.0074	-2.61
FA2H	0.0420	-2.80			0.0305	-2.61
C130093G08RIK	0.0286	-2.82			0.0207	-2.62



**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
C230084O18RIK	0.0150	-2.54	0.0107	-2.70	0.0055	-2.62
2810012G08RIK	0.0082	-2.57	0.0066	-2.67	0.0029	-2.62
HIST1H2AG	0.0463	-2.31	0.0133	-2.98	0.0120	-2.62
CHTF18			0.0218	-2.88	0.0169	-2.63
HIST1H2AD			0.0355	-3.03	0.0343	-2.63
CDCA5			0.0208	-3.08	0.0216	-2.63
PSMC3IP			0.0085	-3.18	0.0104	-2.63
SOX8	0.0024	-2.58	0.0017	-2.71	0.0007	-2.64
GLDC			0.0345	-3.45		
HEY2	0.0089	-2.58	0.0066	-2.71	0.0031	-2.65
RHBDL4	0.0144	-2.19	0.0012	-3.19	0.0015	-2.65
2310010B21RIK	0.0409	-2.79			0.0273	-2.65
2810468N07RIK	0.0126	-2.72	0.0163	-2.59	0.0063	-2.65
FANCD2			0.0176	-3.08	0.0172	-2.66
RBMX			0.0171	-3.18	0.0194	-2.66
6720463M24RIK			0.0068	-3.30	0.0093	-2.67
DDR1	0.0101	-1.98	0.0001	-3.60	0.0003	-2.67
PEA15	0.0020	-2.25	0.0001	-3.17	0.0001	-2.67
FGFR1OP2	0.0378	-2.37	0.0113	-3.01	0.0097	-2.67
NTRK2	0.0235	-2.25	0.0031	-3.17	0.0035	-2.67
1200008O12RIK	0.0356	-2.26	0.0059	-3.16	0.0064	-2.67
E030049G20RIK	0.0020	-2.71	0.0024	-2.64	0.0008	-2.67
HIST1H2AN			0.0192	-3.06	0.0177	-2.68
CDK2			0.0054	-4.02	0.0171	-2.68
ABAT			0.0011	-3.76	0.0032	-2.68
CAPN5	0.0141	-2.84	0.0251	-2.53	0.0086	-2.68
KIF18A	0.0094	-2.46	0.0031	-2.93	0.0021	-2.68
UACA			0.0109	-3.59	0.0199	-2.69
A930031L14RIK	0.0094	-2.55	0.0049	-2.83	0.0027	-2.69
RGL1	0.0296	-2.41	0.0091	-3.02	0.0074	-2.70
IRX3			0.0014	-3.94	0.0047	-2.71
GPR49	0.0017	-2.76	0.0023	-2.65	0.0007	-2.71

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
IQGAP3	0.0441	-2.30	0.0082	-3.22	0.0088	-2.72
HOXA2			0.0268	-3.43	0.0352	-2.73
HSD11B2	0.0449	-2.95			0.0333	-2.73
SPON1			0.0077	-4.06	0.0211	-2.73
ESPL1	0.0289	-2.47	0.0097	-3.06	0.0075	-2.74
RRM1	0.0257	-2.38	0.0053	-3.17	0.0050	-2.75
2610528E23RIK			0.0489	-3.02	0.0391	-2.75
CELSR1			0.0006	-4.25	0.0031	-2.75
PTX3			0.0414	-2.94	0.0291	-2.75
USP2	0.0285	-2.04	0.0006	-3.73	0.0015	-2.75
B230215L15RIK	0.0002	-2.55	0.0001	-2.98	0.0000	-2.76
IPO9			0.0216	-3.15	0.0195	-2.76
TCF19			0.0133	-3.80	0.0255	-2.76
GSH1	0.0097	-2.63	0.0053	-2.91	0.0029	-2.77
LOC231663			0.0096	-3.46	0.0129	-2.77
CHAF1A			0.0214	-3.51	0.0287	-2.78
LOC381914	0.0396	-2.90			0.0250	-2.78
BC027344			0.0361	-3.17	0.0325	-2.78
HOXB2			0.0156	-3.74	0.0267	-2.78
FBXL3A	0.0259	-2.68	0.0177	-2.90	0.0100	-2.78
FUT10	0.0235	-2.26	0.0020	-3.43	0.0027	-2.79
D8ERTD319E	0.0127	-2.84	0.0154	-2.74	0.0061	-2.79
SP8	0.0152	-3.02	0.0318	-2.58	0.0104	-2.79
POLD1			0.0216	-3.09	0.0169	-2.79
4922502B01RIK	0.0133	-2.55	0.0046	-3.06	0.0031	-2.79
5730547N13RIK			0.0315	-3.53	0.0407	-2.80
DBI			0.0015	-4.43	0.0066	-2.80
PPNR			0.0018	-4.13	0.0056	-2.81
HAS2	0.0227	-2.92	0.0313	-2.71	0.0129	-2.81
CASP7	0.0002	-2.49	0.0000	-3.19	0.0000	-2.81
NEUROG3	0.0292	-3.07			0.0213	-2.82
HIST1H2AH			0.0279	-3.25	0.0256	-2.82

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
GAS2L3			0.0059	-3.70	0.0099	-2.83
IQGAP2	0.0081	-2.19	0.0002	-3.66	0.0004	-2.83
INCENP	0.0327	-2.51	0.0104	-3.19	0.0085	-2.83
SCL0004175.1_57	0.0171	-2.14	0.0004	-3.75	0.0009	-2.83
TRH	0.0437	-3.35			0.0446	-2.83
F830009M01RIK			0.0478	-2.88	0.0277	-2.84
C130023A14RIK	0.0031	-2.43	0.0003	-3.32	0.0003	-2.84
BCL11B	0.0199	-2.73	0.0132	-2.97	0.0073	-2.85
5930402A21			0.0013	-4.26	0.0045	-2.85
PLP	0.0466	-2.54	0.0169	-3.20	0.0138	-2.85
RAD54L			0.0167	-3.30	0.0158	-2.85
SMAD3			0.0007	-4.16	0.0022	-2.85
PLD1			0.0006	-4.52	0.0029	-2.85
FBLN1			0.0340	-3.18	0.0273	-2.86
2310016C16RIK			0.0019	-5.36	0.0141	-2.86
ELAVL1			0.0029	-4.44	0.0102	-2.86
PYGB	0.0446	-2.16	0.0022	-3.79	0.0041	-2.86
HIST1H2AK			0.0273	-3.24	0.0234	-2.86
2610019I03RIK	0.0474	-2.35	0.0070	-3.51	0.0084	-2.87
F630043A04RIK	0.0260	-2.63	0.0110	-3.14	0.0076	-2.87
CENPP			0.0135	-3.48	0.0150	-2.88
HIST2H2AB			0.0356	-3.11	0.0254	-2.88
FOXN4	0.0468	-3.06			0.0322	-2.89
4933427D14RIK			0.0366	-3.06	0.0241	-2.89
5830411I20	0.0063	-2.52	0.0010	-3.34	0.0009	-2.90
D830030K20RIK	0.0000	-2.62	0.0000	-3.21	0.0000	-2.90
1300014I06RIK	0.0048	-2.32	0.0002	-3.64	0.0003	-2.90
KIFC1	0.0217	-2.45	0.0034	-3.45	0.0035	-2.91
LOC381230	0.0454	-2.85	0.0387	-2.97	0.0220	-2.91
PLEKHB1			0.0094	-4.06	0.0186	-2.91
2810003C17RIK	0.0047	-2.79	0.0027	-3.05	0.0013	-2.92
SLC9A3R1			0.0163	-4.47	0.0395	-2.93

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
GP38	0.0256	-2.06	0.0003	-4.17	0.0009	-2.93
ATRNL1	0.0093	-3.43	0.0403	-2.50	0.0089	-2.93
A1838661			0.0254	-3.36	0.0226	-2.93
SCL0002449.1_77			0.0048	-4.00	0.0094	-2.93
3110050L10RIK	0.0017	-2.76	0.0008	-3.11	0.0004	-2.93
NKX6-2	0.0022	-2.77	0.0010	-3.11	0.0005	-2.93
ERBB2			0.0026	-4.44	0.0080	-2.95
A1661438	0.0232	-2.91	0.0198	-3.01	0.0100	-2.96
ETV1	0.0042	-2.80	0.0019	-3.19	0.0010	-2.99
COL4A5			0.0030	-4.41	0.0082	-2.99
LRP2			0.0121	-3.95	0.0181	-3.01
ZIC3			0.0393	-3.64	0.0416	-3.02
KNTC1	0.0340	-2.67	0.0109	-3.43	0.0089	-3.03
TIMP3	0.0034	-3.11	0.0044	-2.97	0.0014	-3.04
1200009O22RIK			0.0043	-4.30	0.0094	-3.04
SSTR2	0.0317	-3.32			0.0231	-3.04
1190002F15RIK	0.0063	-2.72	0.0016	-3.40	0.0011	-3.04
E330029N23RIK	0.0279	-2.58	0.0055	-3.59	0.0053	-3.04
3000004C01RIK	0.0396	-2.60	0.0094	-3.58	0.0089	-3.05
9130430L19RIK	0.0187	-2.92	0.0120	-3.21	0.0066	-3.06
KIF15	0.0139	-2.72	0.0039	-3.45	0.0030	-3.06
MCM2			0.0097	-4.91	0.0282	-3.06
KCNE1L	0.0498	-2.50	0.0079	-3.80	0.0092	-3.08
H2AFX	0.0228	-2.66	0.0052	-3.58	0.0046	-3.08
LOC327816	0.0000	-2.62	0.0000	-3.68	0.0000	-3.10
HOXB4			0.0079	-4.02	0.0112	-3.10
ADAMTS9			0.0456	-3.86		
E030026I10RIK	0.0365	-2.26	0.0013	-4.27	0.0027	-3.11
ZFP36L1			0.0011	-5.02	0.0046	-3.12
E130016E03RIK			0.0262	-3.68	0.0253	-3.12
D2ERTD750E	0.0191	-2.85	0.0080	-3.42	0.0053	-3.12
NES			0.0009	-5.59	0.0060	-3.13

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
RRM2	0.0343	-2.55	0.0050	-3.84	0.0057	-3.13
E130114P18RIK	0.0264	-3.09	0.0236	-3.18	0.0120	-3.13
SPARCL1	0.0135	-2.50	0.0010	-3.94	0.0013	-3.14
FZD9	0.0001	-3.08	0.0001	-3.20	0.0000	-3.14
BC006933			0.0166	-3.62	0.0143	-3.15
PTN	0.0025	-3.50	0.0083	-2.82	0.0017	-3.15
GPR23			0.0021	-4.66	0.0056	-3.15
VCAM1			0.0050	-4.10	0.0073	-3.15
A330021E22RIK			0.0304	-3.48	0.0228	-3.15
PDLIM4			0.0178	-3.66	0.0158	-3.16
PPP1R3C			0.0043	-4.62	0.0100	-3.16
LOC382555	0.0497	-3.13	0.0462	-3.20	0.0258	-3.16
2610002D18RIK	0.0302	-3.18	0.0313	-3.15	0.0153	-3.17
MCM3			0.0157	-3.97	0.0186	-3.17
CASKIN2	0.0165	-2.11	0.0001	-4.78	0.0003	-3.17
CCDC5			0.0302	-3.63	0.0257	-3.18
INHBB	0.0016	-3.10	0.0011	-3.29	0.0004	-3.19
ANLN	0.0482	-2.73	0.0132	-3.76	0.0122	-3.20
D4ERTD681E			0.0004	-5.28	0.0019	-3.22
CRYM	0.0057	-3.19	0.0051	-3.26	0.0021	-3.23
MCM5			0.0284	-4.62	0.0477	-3.23
FGFR3	0.0264	-2.09	0.0001	-5.00	0.0006	-3.23
SOX2	0.0113	-2.39	0.0003	-4.38	0.0006	-3.23
SOX14	0.0235	-3.61			0.0179	-3.24
MPHOSPH1	0.0441	-2.53	0.0048	-4.16	0.0065	-3.25
BC021523	0.0252	-3.23	0.0238	-3.27	0.0117	-3.25
C430010P07RIK	0.0257	-3.27	0.0259	-3.26	0.0124	-3.26
HPS1	0.0006	-3.19	0.0004	-3.34	0.0001	-3.27
VIT			0.0079	-4.71	0.0156	-3.28
GTSE1			0.0113	-4.24	0.0147	-3.29
FZD7	0.0244	-2.59	0.0021	-4.22	0.0028	-3.30
1110003F05RIK			0.0008	-5.01	0.0024	-3.31

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
2600001J17RIK			0.0163	-4.51	0.0248	-3.31
CDKN3	0.0248	-2.89	0.0072	-3.81	0.0058	-3.32
ZFP68	0.0348	-3.20	0.0258	-3.47	0.0148	-3.33
CDC25C	0.0102	-2.83	0.0017	-3.94	0.0015	-3.34
SOX13	0.0119	-2.98	0.0038	-3.74	0.0027	-3.34
RPP25	0.0345	-3.22	0.0258	-3.48	0.0148	-3.35
CD1D1	0.0030	-2.96	0.0006	-3.84	0.0004	-3.37
DBF4	0.0377	-3.21	0.0259	-3.55	0.0156	-3.37
RAD52B			0.0144	-4.69	0.0231	-3.38
METRNL			0.0018	-6.57	0.0111	-3.40
SOX21	0.0192	-2.35	0.0003	-4.91	0.0008	-3.40
SCL0002507.1_236			0.0309	-3.88	0.0256	-3.40
A830059I20RIK	0.0013	-3.42	0.0014	-3.39	0.0004	-3.40
MAD2L1			0.0079	-4.29	0.0094	-3.41
CDCA8	0.0440	-2.75	0.0073	-4.26	0.0082	-3.42
MCM10			0.0338	-3.95	0.0287	-3.43
SPAG5	0.0265	-2.86	0.0052	-4.12	0.0050	-3.43
APOE	0.0271	-3.20	0.0153	-3.69	0.0095	-3.43
GLI3			0.0163	-4.30	0.0182	-3.45
FIGNL1			0.0161	-4.58	0.0213	-3.48
STK6	0.0457	-2.98	0.0141	-4.08	0.0123	-3.49
B230399E16RIK	0.0026	-3.67	0.0044	-3.32	0.0012	-3.49
SLC30A3	0.0105	-4.40			0.0121	-3.49
B230312I18RIK	0.0387	-3.12	0.0165	-3.92	0.0122	-3.50
C79407	0.0128	-2.95	0.0023	-4.16	0.0021	-3.50
6430706D22RIK	0.0122	-3.25	0.0060	-3.79	0.0035	-3.51
UHRF1			0.0129	-4.46	0.0151	-3.51
AW011738	0.0000	-3.21	0.0000	-3.85	0.0000	-3.51
NOTCH1	0.0099	-2.50	0.0002	-4.94	0.0004	-3.51
KIF4	0.0142	-2.92	0.0022	-4.27	0.0021	-3.53
LRIG1	0.0110	-2.71	0.0006	-4.61	0.0009	-3.53
DDX11			0.0098	-4.43	0.0108	-3.55

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
PRELP			0.0156	-5.94	0.0394	-3.55
NDE1			0.0019	-5.15	0.0041	-3.55
E130306D19RIK			0.0108	-4.62	0.0136	-3.57
KIFC5A			0.0038	-4.89	0.0061	-3.58
SCL0001284.1_18	0.0122	-4.19	0.0392	-3.08	0.0103	-3.59
SPC25			0.0072	-5.25	0.0140	-3.59
MGST1	0.0463	-2.36	0.0009	-5.47	0.0024	-3.59
LOC328752			0.0138	-4.48	0.0144	-3.63
IDB1			0.0334	-3.99	0.0236	-3.64
MT3	0.0124	-2.49	0.0002	-5.35	0.0004	-3.65
FOXM1	0.0163	-3.01	0.0026	-4.44	0.0026	-3.65
COL2A1	0.0253	-3.18	0.0078	-4.23	0.0062	-3.67
ESCO2			0.0214	-4.68	0.0244	-3.67
2610206B13RIK	0.0281	-3.69	0.0290	-3.65	0.0140	-3.67
PDGFRA			0.0089	-5.27	0.0156	-3.67
SLC17A8	0.0186	-4.04	0.0366	-3.35	0.0127	-3.68
GLI2	0.0307	-3.70	0.0317	-3.66	0.0155	-3.68
MEGF10			0.0004	-6.43	0.0018	-3.68
LOC382190	0.0363	-3.38	0.0195	-4.03	0.0129	-3.69
PRKAG2	0.0326	-3.67	0.0311	-3.72	0.0159	-3.70
BRRN1			0.0050	-5.00	0.0074	-3.70
TPX2	0.0189	-3.09	0.0036	-4.49	0.0033	-3.72
CALMBP1	0.0093	-3.15	0.0016	-4.51	0.0014	-3.77
CDC2A			0.0107	-5.24	0.0161	-3.79
ITGB4	0.0197	-2.55	0.0003	-5.65	0.0008	-3.80
3222401M22RIK	0.0024	-3.91	0.0031	-3.71	0.0010	-3.81
AW536289	0.0330	-3.15	0.0074	-4.62	0.0070	-3.81
PDLIM3	0.0000	-4.42	0.0001	-3.29	0.0000	-3.82
DLL1	0.0022	-3.15	0.0002	-4.62	0.0002	-3.82
IGSF11	0.0066	-3.28	0.0014	-4.49	0.0011	-3.84
ASCL1	0.0017	-2.93	0.0001	-5.04	0.0001	-3.84
CCNG2			0.0410	-4.01	0.0247	-3.85

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
TTYH1	0.0050	-3.01	0.0003	-4.94	0.0004	-3.85
KIF11	0.0237	-3.28	0.0062	-4.57	0.0052	-3.87
2310007D09RIK	0.0148	-3.50	0.0062	-4.31	0.0040	-3.88
2610017I09RIK	0.0013	-3.73	0.0008	-4.07	0.0003	-3.90
NCAPH			0.0076	-5.48	0.0119	-3.90
NUSAP1	0.0334	-2.89	0.0027	-5.28	0.0039	-3.91
MKI67	0.0406	-2.89	0.0036	-5.31	0.0052	-3.92
1110017L21RIK			0.0085	-5.08	0.0101	-3.92
FTHFD	0.0145	-2.85	0.0005	-5.53	0.0010	-3.97
ALDOC			0.0214	-5.44	0.0287	-3.97
A830089I03RIK	0.0289	-3.65	0.0159	-4.33	0.0100	-3.98
3000002B06RIK			0.0003	-7.34	0.0018	-3.98
SLC1A3			0.0018	-6.87	0.0062	-4.01
LOC329506	0.0205	-3.72	0.0117	-4.31	0.0069	-4.01
BC024139	0.0003	-4.08	0.0004	-3.94	0.0001	-4.01
RFTN2	0.0064	-3.79	0.0036	-4.31	0.0018	-4.04
EPHB1	0.0007	-4.48	0.0020	-3.70	0.0004	-4.07
LARS2	0.0259	-4.09	0.0264	-4.07	0.0127	-4.08
D330027H18RIK	0.0159	-4.05	0.0147	-4.14	0.0068	-4.09
PSMD8			0.0334	-4.45	0.0224	-4.09
NOTCH3	0.0112	-3.02	0.0005	-5.71	0.0008	-4.15
BIRC5			0.0156	-5.54	0.0191	-4.16
KIF22	0.0409	-3.14	0.0052	-5.50	0.0064	-4.16
TROAP	0.0187	-3.48	0.0042	-5.03	0.0036	-4.19
PRC1			0.0048	-5.99	0.0079	-4.19
CAV1			0.0324	-5.46	0.0351	-4.23
CDCA3			0.0075	-5.86	0.0101	-4.28
CCND1			0.0033	-6.33	0.0058	-4.31
MELA	0.0281	-3.56	0.0069	-5.23	0.0061	-4.32
TOMM22	0.0402	-4.09	0.0269	-4.68	0.0166	-4.38
MCM6			0.0089	-5.91	0.0111	-4.39
NKX2-3	0.0006	-4.46	0.0007	-4.33	0.0002	-4.40



**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
CDC20			0.0064	-6.09	0.0088	-4.40
SGOL2			0.0096	-5.83	0.0110	-4.44
DLX2	0.0061	-4.27	0.0042	-4.67	0.0019	-4.47
CDCA2	0.0462	-3.53	0.0100	-5.67	0.0101	-4.47
2610318C08RIK	0.0126	-3.62	0.0021	-5.57	0.0019	-4.49
2810410P22RIK	0.0361	-4.41	0.0324	-4.57	0.0173	-4.49
CDCA7			0.0171	-6.48	0.0240	-4.53
2310047A01RIK	0.0173	-3.52	0.0023	-5.82	0.0024	-4.53
DLG7	0.0270	-4.26	0.0176	-4.87	0.0102	-4.55
RPGRIP1	0.0400	-4.61	0.0427	-4.51	0.0217	-4.56
TOP2A	0.0440	-3.55	0.0082	-5.93	0.0088	-4.59
SOX9	0.0065	-3.42	0.0004	-6.24	0.0005	-4.62
CTE1	0.0053	-3.52	0.0004	-6.18	0.0004	-4.67
CENPA			0.0112	-6.72	0.0162	-4.67
3110069A13RIK	0.0161	-5.09	0.0273	-4.31	0.0098	-4.68
TAL1	0.0088	-5.52	0.0271	-3.97	0.0069	-4.68
PPAP2B	0.0026	-3.93	0.0004	-5.74	0.0003	-4.75
KIF2C			0.0071	-7.05	0.0105	-4.87
AURKB			0.0080	-6.97	0.0107	-4.94
FGF15	0.0410	-4.90	0.0391	-5.00	0.0209	-4.95
C630002C17RIK	0.0196	-3.64	0.0018	-6.75	0.0023	-4.96
GATA2	0.0078	-5.40	0.0139	-4.58	0.0044	-4.97
BUB1B	0.0326	-3.98	0.0074	-6.30	0.0069	-5.00
CCNB1			0.0091	-7.59	0.0145	-5.02
1190002H23RIK	0.0031	-4.50	0.0011	-5.73	0.0006	-5.08
1700018O18RIK	0.0089	-4.04	0.0013	-6.48	0.0012	-5.12
2900056M07RIK	0.0045	-5.62	0.0083	-4.76	0.0024	-5.17
PBK			0.0028	-8.74	0.0061	-5.30
2010317E24RIK	0.0042	-4.54	0.0011	-6.29	0.0007	-5.35
CHST3	0.0015	-4.16	0.0001	-6.90	0.0001	-5.36
1110005F07RIK	0.0312	-4.69	0.0139	-6.18	0.0097	-5.38
DBX1	0.0110	-6.31	0.0255	-4.78	0.0075	-5.49

**Supplemental Table 3**  
**Interline N+P+/H+**

Column ID	p-value (Nurr+ vs. Hes+)	Fold-Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold-Change (Pitx+ vs. Hes+)	p-value (N+P+ vs. H+)	Fold-Change (N+ P+ vs. H+)
GATA3	0.0094	-6.23	0.0206	-4.85	0.0061	-5.50
GPR17	0.0395	-5.85			0.0243	-5.50
IDB4	0.0012	-5.29	0.0008	-5.73	0.0003	-5.51
BCAS1			0.0280	-7.46	0.0296	-5.58
BCAN	0.0024	-5.41	0.0016	-5.96	0.0007	-5.68
TIMP4	0.0134	-5.18	0.0072	-6.25	0.0041	-5.69
EGFP	0.0054	-4.01	0.0003	-8.15	0.0004	-5.71
KIF23	0.0135	-5.20	0.0061	-6.64	0.0037	-5.88
6330404F12RIK	0.0003	-7.13	0.0013	-4.95	0.0002	-5.94
6330527006RIK	0.0208	-8.46			0.0247	-5.96
EDNRB	0.0111	-4.00	0.0005	-8.94	0.0008	-5.98
HES5	0.0011	-6.43	0.0016	-5.85	0.0004	-6.13
NRARP	0.0006	-5.97	0.0005	-6.40	0.0002	-6.18
LOC229810			0.0423	-6.88	0.0274	-6.33
GAD1	0.0001	-7.60	0.0005	-5.40	0.0001	-6.40
NKX2-2	0.0001	-6.34	0.0001	-6.72	0.0000	-6.53
GRB10	0.0000	-22.25	0.0261	-1.92	0.0000	-6.53
1110018K11RIK	0.0011	-4.95	0.0001	-8.66	0.0001	-6.55
SALL3	0.0006	-5.65	0.0001	-7.88	0.0001	-6.67
MMD2	0.0023	-5.69	0.0006	-8.15	0.0004	-6.81
PICALM	0.0000	-6.82	0.0000	-6.83	0.0000	-6.83
PTPRZ1	0.0060	-5.53	0.0012	-8.71	0.0009	-6.94
LRRC57	0.0251	-7.29	0.0272	-7.04	0.0126	-7.16
LOC434280	0.0008	-7.53	0.0009	-7.35	0.0003	-7.44
ATP1A2	0.0000	-8.51	0.0001	-6.89	0.0000	-7.65
WNT7B	0.0001	-5.28	0.0000	-11.28	0.0000	-7.72
SLC25A18	0.0340	-5.73	0.0073	-10.50	0.0071	-7.75
VIAAT	0.0003	-11.08	0.0028	-5.94	0.0003	-8.12
LOC277193	0.0003	-7.37	0.0001	-8.94	0.0001	-8.12
WNT7A	0.0002	-8.35	0.0003	-8.12	0.0001	-8.24
2810417H13RIK	0.0192	-7.75	0.0104	-9.94	0.0062	-8.78
COPS8	0.0297	-8.72	0.0263	-9.23	0.0137	-8.97

**Supplemental Table 3**  
**Interline N+P+/H+**

<b>Column ID</b>	<b>p-value (Nurr+ vs. Hes+)</b>	<b>Fold-Change (Nurr+ vs. Hes+)</b>	<b>p-value (Pitx+ vs. Hes+)</b>	<b>Fold-Change (Pitx+ vs. Hes+)</b>	<b>p-value (N+P+ vs. H+)</b>	<b>Fold-Change (N+ P+ vs. H+)</b>
ZIC1	0.0015	-12.82	0.0116	-6.39	0.0015	-9.05
ACAS2L	0.0002	-9.00	0.0001	-9.24	0.0000	-9.12
SERPINA3N	0.0084	-11.16	0.0161	-8.54	0.0050	-9.76
DLX1	0.0030	-10.15	0.0022	-11.26	0.0009	-10.69
FGFBP3	0.0001	-8.59	0.0000	-15.88	0.0000	-11.68
LOC383308	0.0474	-12.19	0.0345	-14.88	0.0211	-13.47
SOX10	0.0029	-17.69	0.0045	-14.62	0.0013	-16.08
PLK1	0.0000	-18.58	0.0000	-19.72	0.0000	-19.14
2610305J24RIK	0.0005	-18.18	0.0003	-21.45	0.0001	-19.75
OLIG1	0.0007	-38.03	0.0013	-29.27	0.0003	-33.36
POU6F1	0.0000	-31.70	0.0000	-38.86	0.0000	-35.10

Supplemental Table 4  
Gene Ontology

**Transcription Factors**

Column ID	p-value (N+P+)/H+	Fold Change (P+/N+)/H+	p-value (Nurr+ vs. Hes+)	Fold Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold Change (Pitx+ vs. Hes+)	p-value (Nurr+ vs. Nurr-)	Fold Change (Nurr+ vs. Nurr-)	p-value vs. Pitx-	(Pitx+ vs. Pitx-)	Fold Change (Pitx+ vs. Pitx-)
NR4A2	0.0019	7.19	0.0048	7.28	0.0052	7.10	0.0076	6.30	0.0013		11.13
PITX3	0.0014	6.99	0.0145	4.71	0.0010	10.38	0.0164	4.53	0.0005		12.69
RHOX13	0.0177	4.79	0.0086	7.89							
EBF3	0.0004	4.70	0.0014	4.71	0.0014	4.69	0.0011	4.91	0.0001		9.10
LMX1A	0.0286	5.42	0.0366	6.33							
PBX1	0.0003	3.94	0.0016	3.55	0.0005	4.39	0.0213	2.28	0.0012		3.71
UNCX4.1	0.0008	3.91	0.0006	5.24	0.0108	2.92	0.0017	4.19	0.0006		5.20
EN1	0.0033	3.51			0.0013	5.27			0.0301		2.66
FOXP2	0.0025	3.37	0.0079	3.22	0.0051	3.52	0.0254	2.56	0.0041		3.67
PITX2	0.0217	3.27	0.0149	4.36							
B230208J24RIK (ZBTB7C)	0.0020	2.73	0.0157	2.30	0.0018	3.25	0.0222	2.18	0.0029		3.01
POU2F2	0.0146	2.58	0.0388	2.43	0.0224	2.73	0.0369	2.46			
FOXA2	0.0097	2.31	0.0107	2.58	0.0398	2.07					
LMO3	0.0029	2.30	0.0202	2.00	0.0027	2.64	0.0068	2.32	0.0002		3.91
4921520P21RIK (Dmrtc1a)	0.0132	2.24			0.0077	2.78					
YBX3(CSDA)	0.0041	2.18	0.0036	2.51	0.0273	1.90					
FOXP1	0.0060	2.00	0.0035	2.39							

**Membrane Proteins**

Column ID	p-value (N+P+)/H+	Fold Change (P+/N+)/H+	p-value (Nurr+ vs. Hes+)	Fold Change (Nurr+ vs. Hes+)	p-value (Pitx+ vs. Hes+)	Fold Change (Pitx+ vs. Hes+)	p-value (Nurr+ vs. Nurr-)	Fold Change (Nurr+ vs. Nurr-)	p-value vs. Pitx-	(Pitx+ vs. Pitx-)	Fold Change (Pitx+ vs. Pitx-)
RIT2	0.0023	9.72	0.0169	6.59	0.0021	14.33			0.0440		4.62
RET	0.0002	8.30	0.0048	5.04	0.0001	13.66	0.0098	4.22	0.0002		12.15
MARCH4	0.0004	6.68	0.0059	4.55	0.0003	9.81	0.0026	5.57	0.0003		9.86
CHRNA6	0.0007	4.79	0.0402	2.50	0.0001	9.18			0.0001		8.92
CNTNAP4	0.0120	4.70	0.0451	3.87	0.0138	5.71			0.0383		4.08
NRN1	0.0012	4.57	0.0029	4.71	0.0037	4.44	0.0072	3.83	0.0003		7.75
GLRA2	0.0165	4.52			0.0159	5.78					
SLC35D3	0.0003	4.40	0.0018	3.88	0.0005	4.98	0.0084	2.93	0.0004		5.27
CBLN1	0.0010	4.26	0.0006	5.83	0.0124	3.11	0.0013	4.98	0.1027		1.98
GPR158	0.0037	4.22	0.0288	3.16	0.0028	5.64			0.0147		3.74
CHL1	0.0041	4.09	0.0198	3.44	0.0049	4.86	0.0377	2.93	0.0229		3.32
RGS9	0.0031	3.86	0.0175	3.20	0.0034	4.65	0.0343	2.74	0.0211		3.07
CHST8	0.0005	3.79	0.0006	4.59	0.0045	3.12	0.0006	4.52	0.0003		5.31
CACNG3	0.0497	3.73			0.0311	5.47					
KCNV2	0.0178	3.68	0.0142	4.82			0.0738	2.93	0.0079		5.74
SCN3B	0.0022	3.44	0.0140	2.87	0.0023	4.11	0.0294	2.48	0.0064		3.35
ATP1B1	0.0023	3.12	0.0089	2.89	0.0039	3.37					
CHST1	0.0005	3.05	0.0165	2.13	0.0002	4.37	0.0314	1.94	0.0046		2.57
GUCY2C	0.0001	3.03	0.0015	2.54	0.0001	3.61	0.0026	2.37	0.0001		3.84
SGPP2	0.0033	2.94	0.0119	2.75	0.0057	3.14	0.0101	2.83	0.0014		4.08
D10BWG1379E	0.0006	2.86	0.0011	3.05	0.0028	2.68	0.0016	2.92	0.0061		2.40
MAST1	0.0232	2.75			0.0299	3.02	0.0414	2.79			
ATP10D	0.0067	2.68	0.0036	3.51							
CACNA2D1	0.0045	2.64	0.0031	3.29	0.0374	2.12	0.0103	2.66	0.0371		2.13
ELMO1	0.0004	2.56	0.0006	2.80	0.0026	2.34	0.0005	2.90	0.0003		3.05
UTS2R	0.0002	2.54	0.0008	2.44	0.0004	2.64	0.0005	2.60	0.0002		2.91
SCN3A	0.0015	2.53	0.0068	2.36	0.0025	2.72	0.0068	2.36	0.0076		2.32
SYP	0.0226	2.45			0.0197	2.90					
GABRB3	0.0078	2.43	0.0096	2.70	0.0311	2.20	0.0133	2.55	0.0425		2.08
6230400G14RIK (Prickle2)	0.0015	2.43	0.0035	2.49	0.0050	2.37	0.0051	2.36	0.0098		2.16
SYT13	0.0013	2.42	0.0121	2.06	0.0011	2.83	0.0220	1.91	0.0008		2.97
RAB15	0.0068	2.40	0.0217	2.26	0.0107	2.55			0.0192		2.31
SEZ6L2	0.0239	2.34			0.0297	2.55	0.0316	2.52	0.2168		1.64
PTPRU	0.0090	2.30			0.0048	2.90			0.0015		3.52
OPN3	0.0005	2.25	0.0031	2.10	0.0009	2.41	0.0020	2.20	0.0001		3.00
SYNGR3	0.0256	2.24	0.0803	2.01	0.0278	2.49					
GPR43	0.0365	2.21			0.0348	2.53					
ALOX5AP	0.0016	2.15	0.0053	2.09	0.0034	2.20					
RAB3A	0.0282	2.12			0.0458	2.17					
CHRNA5	0.0033	2.11	0.0005	3.08			0.0002	3.47			
KCNG4	0.0032	2.08	0.0089	2.05	0.0070	2.11	0.0097	2.03	0.0054		2.18
CRG-L1	0.0016	2.04	0.0017	2.27	0.0119	1.83			0.0109		1.85