

Supplementary Table 1: Antibodies

Antigen	Host	Dilution	Source
5-HT	Rabbit	1:2000	Sigma S5545
ActivinR1A	Rabbit	1:500	Abcam ab60157
ActivinR2A	Rabbit	1:1000	Abcam ab96793
AHR	Rabbit	1:300	Abcam ab84833
ALX1	Rabbit	1:100; AR	Sigma HPA018905
Calbindin	Rabbit	1:1000	Chemicon AB1778
Calbindin	Goat	1:500	R&D AF3320
CGRP	Rabbit	1:5000	Sigma C8198
CGRP	Goat	1:1500	AdBsero 1720-9007
ChAT	Goat	1:300; AR	Millipore AB144P
CTGF	Rabbit	1:400	Abcam ab6992
CUX1	Rabbit	1:200; AR	Santa Cruz sc-13024
CXCR4	Rabbit	1:500	Abcam ab124824
CXCL12	Mouse	1:100	R&D 79018
EBF1	Rabbit	1:2000	Nordic Bio LSB6814
EBF1-3	Rabbit	1:500	Santa Cruz (H-300) sc-33552
ETV1	Rabbit	1:250	Kind gift from S. Arber ¹
FGF1	Rabbit	1:2000	Abcam ab9588
FGFR1	Rabbit	1:1000	Abcam ab10646
FOXD1	Goat	1:100	Nordic Bio LSB6453
GDF10	Rabbit	1:50	Atlas ab HPA015498
HDX	Rabbit	1:150; AR	Atlas ab HPA047189
HMX1	Rabbit	1:2000	Kind gift from E. Turner ²
HOXA3	Rabbit	1:500	Kind gift from T.M. Jessell ³
HOXB3	Rabbit	1:500	Santa Cruz (H50) sc-28606
HOXC4	Rabbit	1:500	Kind gift from T.M. Jessell ³
HOXC5	Rabbit	1:1000	Kind gift from T.M. Jessell ⁴
HuC/D	Mouse	1:300	Mol Probes A21271
IGF1	Goat	1:1000	Sigma SAB2501424
IGF1R	Rabbit	1:200	Abcam 131476; human
INHA	Mouse	1:1000	Thermo Fisher MA5-15703
INHBA	Rabbit	1:500	Atlas ab HPA020031
ISL1/2	Guinea Pig	1:10000	Kind gift from T.M. Jessell ⁵
KLF7	Rabbit	1:250; AR	Novus Bio NBP1-80638
LRP11	Rabbit	1:1000	Abcam ab155310
MEF2C	Rabbit	1:400	Cell Signaling 5030XP
MEIS2	Rabbit	1:500; AR	Atlas ab HPA003256
Midkine	Rabbit	1:200	Abcam ab36038
NEUROD4	Rabbit	1:300; AR	Atlas ab HPA026998
NKX6.1	Mouse	1:4	DSHB by O.D Madsen
nNOS	Rabbit	1:500	Santa Cruz sc-648
nNOS	Goat	1:1000	Abcam ab1376
NPY	Rabbit	1:3000	DiaSorin
NPY	Sheep	1:2000	Abcam ab6173

OC2	Rabbit	1:250	Atlas ab HPA057058
PAX3	Mouse	1:100	DSHB by C.P. Ordahl
PBX3	Rabbit	1:500	Santa Cruz sc-891
Plexin B1	Rabbit	1:200	Abcam ab90087
SATB1	Goat	1:500, AR	Santa Cruz (E15) sc-5990
SATB2	Mouse	1:500	Santa Cruz sc-81376
SLITRK2	Rabbit	1:100	Abcam ab67305, human
SLITRK3	Rabbit	1:5000	Abcam ab67306
SOX2	Rabbit	1:5000	Seven Hills WRAB-1236
SOX4	Rabbit	1:150	Atlas ab HPA029901
SOX5	Rabbit	1:1000	Kind gift from J. Muhr
SOX6	Guinea Pig	1:1000	Kind gift from M. Wegner ⁶
SOX6	Rabbit	1:300	Atlas ab HPA001923; human
SOX9	Goat	1:500, AR	R&D AF3075
SOX10	Goat	1:200	Santa Cruz (N20) sc-17342
SOX10	Guinea Pig	1:500	Kind gift from M. Wegner ⁷
SOX11	Rabbit	1:1500	Abcam ab134107
TBX3	Goat	1:300	R&D AF4509
TGFβ2	Rabbit	1:500	Santa Cruz sc-90
TGFβR1	Rabbit	1:500	Santa Cruz sc398 (v22)
TGFβR2	Rabbit	1:500	Abcam ab186838
TLX3	Guinea pig	1:5000; AR	Kind gift from T. Müller and C. Birchmeier
TLX3	Rabbit	1:5000; AR	Kind gift from T. Müller and C. Birchmeier
TH	Rabbit	1:500	Pelfreeze P40101-0
TH	Sheep	1:300	Novus Bio NB300-110
TH	Chicken	1:500	Abcam ab76442
TSHZ3	Rabbit	1:200; AR	Sigma HPA008834
VIP	Rabbit	1:2500	Abcam ab43841
ZEB1	Rabbit	1:400; AR	Santa Cruz sc-25388
ZFHX4	Rabbit	1:100; AR	Sigma HPA023837

Secondary Antibodies	Recognition of	Dilution	Source
Alexa 555	Rabbit, Mouse, Guinea pig, Goat	1:1000	Molecular Probes
Alexa 555	Mouse IgG1& IgG2a	1:1000	Molecular Probes
Alexa 488	Mouse IgG1 & IgG2b, Goat, Rabbit, Chicken, Sheep	1:400	Molecular Probes
Alexa 647	Goat, Rabbit, Mouse	1:200	Molecular Probes

Cy5	Goat, Guinea pig	1:200	Jackson ImmunoResearch
Cy3	Guinea pig	1:1000	Jackson ImmunoResearch

AR: antigen retrieval

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