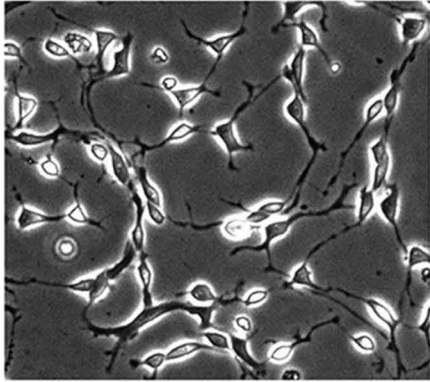
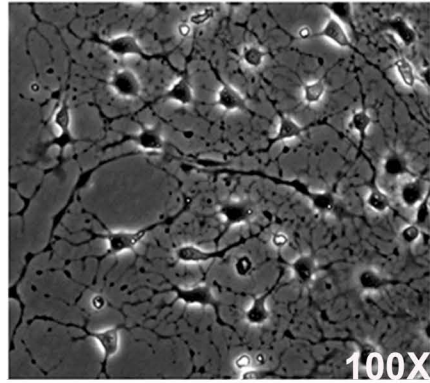


A

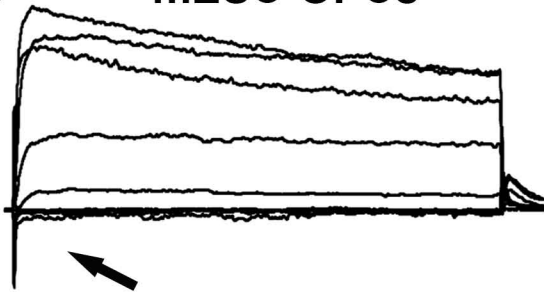
mESC-OPCs



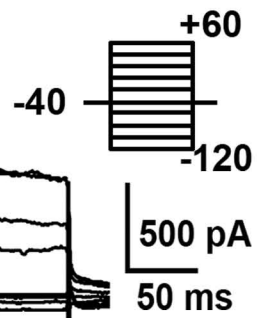
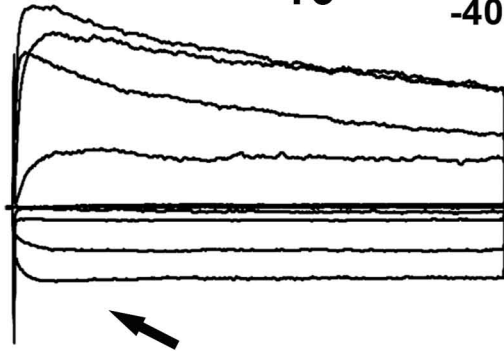
+ T3

**B**

mESC-OPCs



+ T3



Supplementary table 1. Primers (annealing temperature 56 °C)

Gene	Accession No.	Forward sequence	Reverse sequence	Length (bp)
SCN1A (Na _v 1.1)	<u>NM_018733</u>	TTCTTCAGATTAACACTTCAGGGGC	GCGCCTTTCAATAGCTGCAAG	206
SCN2A1 (Na _v 1.2)	<u>NM_001099298</u>	ATGCGGGAAAATGCTATGAC	TAACTTTCCACTACTCTACC	326
SCN3A (Na _v 1.3)	<u>NM_018732</u>	GTAATTTGCAAATCCCTGTGGCC	GCTTGTTCTCATCGTCAATGTCTTG	312
SCN4A (Na _v 1.4)	<u>NM_133199</u>	TTGGGGGAACGGGGCTTTGA	GCTGGGGGACCTGGGCTCTTA	224
SCN5A (Na _v 1.5)	<u>NM_021544</u>	TGTCCCTCCCTGGCACTCACTT	TGCCCCTCCCTCCTTCCGTCTA	279
SCN7A (Na _x)	<u>NM_009135</u>	CCATGGCTGCGGGAGAC	CATTTTGCCTTAAGCGGTAGC	240
SCN8A (Na _v 1.6)	<u>NM_001077499</u>	GAAGAGTTTGCCTTTCATCTACGG	AATCCCTGTGAATGTGTACTCCACA	320
SCN9A (Na _v 1.7)	<u>NM_018852</u>	CCCTTGGATCAGAATCCGCA	GGAATGTCTCCGTAGATGAAGGGT	307
SCN10A (Na _v 1.8)	<u>NM_009134</u>	AGAGATGGCACCAACCTACAG	ACCCCTATGCGACAGTGC	302
SCN11A (Na _v 1.9)	<u>NM_011887</u>	GGAGGAGGAATGTGCCGCTGTC	GTGAGTCCGCCGCTTGTTTCGC	238
SCN1B (β1)	<u>NM_011322</u>	ACGCTGCTGGCTCTCGTGGT	ACAGGTCCTGCAGGTCCTTGGT	307
SCN2B (β2)	<u>NM_001014761</u>	CTTCAACTCCTGCTACACCGTGA	CCGCTCTGGGGGTACTTCTAGA	310
SCN3B (β3)	<u>NM_153522</u>	CTCGAAAGAATCAGAGGGGCTCA	TTCATGGAATTGCCCTGCAC	200
SCN4B (β4)	<u>NM_001013390</u>	ATCCTGCTGCCCTGCACCTT	TGGAGGAAGATGGTGGCAGAGT	305
Olig2	<u>NM_016967</u>	GAAGCAGCAGCGGCTTCACA	CCGTCCATGGCGATGTTGAG	304
NG2	<u>NM_139001</u>	GCTCTGTTCTTCGCCTTACAA	AGTCTGACCTGGAGGCATCCTG	306

Supplementary table 2. Primary antibodies

Antibody	Isotype	Dilution	Source
NG2	Rabbit IgG	1:200	Millipore AB5320
A2B5	Mouse IgM	1:200	Millipore MAB312
Olig2	Goat IgG	1:1000	Phosphosolutions 1538
β III-tubulin	Mouse IgG	1:500	Millipore MAB1637
HB9 or MNR2	Mouse IgG	1:50	Developmental Studies Hybridoma Bank 81.5C10
GFAP	Mouse IgG	1:1000	Millipore AB5804
MBP	Rat IgG	1:100	Millipore MAB386
Anti-GFP	Rabbit IgG	1:1000	Invitrogen A11122
Anti-GFP	Goat IgG	1:1000	Rockland 600-141-215