Fibroblast Growth Factor 2 Regulates Activity and Gene Expression of Human Postmitotic Excitatory Neurons

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Supplementary Table 1. List of primers used in this study: qRT-PCR

Target	Forward	Reverse
NEUROG2	ATCCGAGCAGCACTAACACG	GCTGAGGCACAGTTAGAGCC
VGLUT2	AGATTCCGGGAGGCTACATC	ACTCTGGCTGCTGATGGAAT
SYN	ACTTCTGTGACAAGCCCTGG	ACCACGGGGTACGTTGTACT
MAPT	CACACTTGGACTGGACGTTG	AAGATCGGCTCCACTGAGAA
CAMKIIA	TGATCTTGGCAGCATACTCCT	CGCTTCACGGAAGAGTACCA
DCX	TCAGGACCACAGGCAATAAA	AGACCGGGGTTGTCAAAAA
MAP2	TTCGTTGTGTCGTGTTCTCA	AACCGAGGAAGCATTGATTG
CAMKIIB	CACCGACGAGTACCAGCTCT	GTTGATGATCTTGGCTGCAT
ETV4	GCCCCTCGACTCTGAAGAT	TGGAAATCAGGAACAAACTGC
SPRY4	GAGTACAGCGGCGGCTAA	CAAACCGCTCAATACAGGCT
NRXN3	ATTTGCCGTCATTTACAGGG	TGACTTCCTCCAGCTTCACA
c-FOS	GTGACCGTGGGAATGAAGTT	CCGGGGATAGCCTCTCTTAC
EGR1	GGAAAAGCGGCCAGTATAGG	AGCCCTACGAGCACCTGAC
NXF	CTGCATCTACACTCGCAAGG	GTAGTGCCGCTACGATGTCC
KITLG	AGCGCTGCCTTTCCTTATG	TCCTGCAGATCCCTTCAGTT
GALR1	CTTCTGCTATGCCAAGGTCC	CAACCACCACCAGAACTGTCT
DUSP6	CAGTGACTGAGCGGCTAATG	TGTCCCAGTTTTTCCCTGAG
GAPDH	AAGGTGAAGGTCGGAGTCAA	AATGAAGGGGTCATTGATGG

Supplementary Table 2. Gene Ontology Analysis of Genes Induced by Doxycycline in H9-N1 cells

Gene Ontology Term Number	Term Description	Gene Count	% of total genes	PValue	Genes	Fold Enrichment	Bonferroni	Benjamini	FDR
GO:0007399	Nervous System Development	66	5.94	2.66E-22	MEF2C, GRIK1, FGF14, SCN3B, FGF17, ZEB2, L1CAM, TTLL7, SRRM4, LGI1, NRG1, CHRNA3, DSCAM, RBFOX1, STMN3, ENC1, MYT1L, HES4, LSAMP, CNTN4, NRSN1, SMARCA2, NEURL1, KALRN, DPF3, ACHE, CPLX2, CNTFR, ST8SIA2, NRN1, MYT1, EPHB2, DPF1, APLP1, PCSK2, LHX1, CRMP1, LY6H, AVIL, GPSM1, APBA2, DCX, SIM1, DCLK1, APBA1, GLRB, CYP46A1, MAP1B, DPYSL5, DPYSL4, EVL, DPYSL2, ELAVL3, SHOX2, KIAA2022, SLC4A10, TENM1, ST8SIA4, SMPD1, TMOD2, NEUROD2, GFRA1, MPPED2, MAB21L2, GFRA2, FEZ1	4.01	7.88E-19	7.88E-19	4.79E-19
GO:0007411	Axon Guidance	42	3.78	1.19E-16	DCC, CDK5R1, NRP1, L1CAM, DRGX, EPHB2, CRMP1, TNR, POU4F2, SEMA3C, ROBO2, UNC5C, SPON2, LGI1, TUBB3, FLRT3, FLRT2, KLF7, KIF5A, DRAXIN, KIF5C, SPTBN4, DPYSL5, NFASC, EVL, DPYSL2, NR4A3, NRXN1, PTPRO, SLIT1, SLIT3, NCAM1, EPHA5, TENM2, NTRK1, CNTN2, SPTBN2, CNTN4, RELN, CHL1, KIF26B, FEZ1	4.61	3.29E-13	1.64E-13	2.00E-13
GO:0007269	Neurotransmitter Secretion	22	1.98	1.46E-13	PPFIA2, SYT1, RAB3A, STX1A, CPLX1, NRXN2, PTPRN2, LIN7B, STXBP1, DGKI, NRXN1, BRSK1, RIMS1, SYN1, SNPH, SLC18A3, SLC5A7, VAMP2, SNAP25, APBA1, CHAT, CACNA1B	7.53	4.31E-10	1.44E-10	2.62E-10
GO:0001764	Neuron Migration	28	2.52	2.39E-11	DCC, MEF2C, CDK5R1, NRP1, CDK5R2, TUBB2B, ASTN1, DRGX, NRCAM, GPM6A, MAPT, DNER, PAFAH1B1, DCX, TLX3, DCLK1, PITX2, KIRREL3, PHOX2B, MDGA1, NKX6-1, NTRK2, CNTN2, RELN, NEUROD4, KIAA0319, ADGRL3, CHL1	4.65	7.09E-08	1.77E-08	4.30E-08
GO:0007268	Chemical Synaptic Transmission	41	3.69	9.37E-10	MYO5A, SNCG, SYT1, CPLX1, SNAP91, GRIK1, GRIK2, SYT5, TACR1, GLRA3, CACNB1, TAC1, CACNB3, GABBR2, KCNIP2, AMPH, SLC1A2, KCNQ3, SYN1, CHRNA4, APBA2, PAFAH1B1, LRFN5, SNAP25, NOVA1, APBA1, GLRB, NRXN2, OPRL1, KIF5A, BSN, PCDH8, GRIA3, NRXN1, KCNK3, GABARAP, GRM2, GRIA2, SLC18A3, CACNA1E, CACNA1B	2.98	2.77E-06	5.55E-07	1.68E-06
GO:0014047	Glutamate Secretion	14	1.26	1.09E-09	PPFIA2, RAB3A, SYT1, STX1A, CPLX1, STXBP1, RIMS1, SLC17A7, SLC1A2, GRM2, NTRK2, VAMP2, SNAP25, APBA1	8.73	3.24E-06	5.39E-07	1.97E-06
GO:0007416	Synapse Assemby	19	1.71	4.68E-09	FLRT3, DNM3, ACHE, NRXN2, CLSTN3, SPOCK2, DRD2, BSN, NRXN1, PCLO, NRCAM, GPM6A, DNER, SPTBN2, POU4F1, NRG1, ADGRL3, DSCAM, KIRREL3	5.44	1.38E-05	1.98E-06	8.41E-06
GO:0007156	Homophilic Cell Adhesion	31	2.79	5.38E-09	CADM3, ME3, CLSTN2, CADM1, CLSTN3, CADM2, DSCAML1, PCDHGC4, CDH2, DCHS1, CDH6, CDH22, CDH7, CDH20, TRO, ROBO2, DSCAM, KIRREL3, RET, CDHR1, CDHR2, PCDH9, PCDHGB6, PCDH8, PCDH17, PCDH19, PCDHGB4, CDH12, CDH13, CDH18, CDH10	3.42	1.59E-05	1.99E-06	9.67E-06
GO:0043524	Negative Regulation of Neuron Apoptotic Process	26	2.34	1.05E-07	MEF2C, NRP1, GRIK2, CPEB4, SNCA, TGFB3, CNTFR, CITED1, POU4F1, AGAP2, NEFL, DRAXIN, STXBP1, PARK2, NR4A3, ISL1, PPARGC1A, FAM134B, CORO1A, NTRK1, JUN, SIX1, VSTM2L, NTRK2, FAIM2, CHL1	3.44	3.12E-04	3.47E-05	1.89E-04
GO:0010976	Positve Regulation of Neuron Projection Development	21	1.89	1.07E-07	RET, PPP2R5B, STMN2, ENC1, DPYSL3, KIDINS220, ADCYAP1, EPHA3, TRIM67, NDRG4, NTRK1, CNR1, NTRK2, AVIL, ATP8A2, CNTN1, RELN, CAMK2B, APBB1, NEGR1, FEZ1	4.12	3.16E-04	3.16E-05	1.92E-04