

**Supplementary Table 5.**

List of representative genes associated with brain development showing up- or down-regulation commonly after exposure to DBDE ( $\geq 2$ -fold,  $\leq 0.5$ -fold)

Accession no.	Gene title	Symbol	DBDE		
			10 ppm	100 ppm	1000 ppm
10, 100, 1000 ppm commonly up-regulated (11 genes)					
NM_001136151	Neuregulin 2	Nrg2	2.61	3.91	4.84
NM_053986	Myosin Ib	Myo1b	2.10	3.56	4.53
NM_019236	Hairy and enhancer of split 2	Hes2	3.63	2.35	4.03
NM_017001	Erythropoietin	Epo	3.58	3.25	4.02
NM_001107413	Iroquois homeobox 3	Irx3	2.42	4.11	3.79
NM_012841	Deleted in colorectal carcinoma	Dcc	3.30	2.75	3.17
NM_053708	Gastrulation brain homeobox 2	Gbx2	2.43	2.59	2.93
NM_019374	Prodynorphin	Pdyn	2.80	3.59	2.88
NM_053818	Solute carrier family 6 (neurotransmitter transporter, glycine), member 9	Slc6a9	2.21	3.11	2.60
NM_139113	Nuclear receptor subfamily 2, group F, member 6	Nr2f6	3.32	2.84	2.43
NM_001033955	Calcitonin-related polypeptide alpha	Calca	2.10	2.78	2.03
10, 100, 1000 ppm commonly down-regulated (1 gene)					
NM_147135	SH3-binding domain kinase 1	Sbk1	0.22	0.30	0.36
100, 1000 ppm commonly up-regulated (52 genes)					
NM_022928	G protein-coupled receptor kinase 4	Grk4	0.61	4.57	9.86
NM_024365	5-hydroxytryptamine (serotonin) receptor 6	Htr6	1.15	14.58	8.69
NM_031688	Synuclein, gamma (breast cancer-specific protein 1)	Snca	0.97	4.50	6.05
NM_053851	Calcium channel, voltage-dependent, beta 2 subunit	Cacnb2	1.42	3.55	5.70
NM_133536	RAB3C, member RAS oncogene family	Rab3c	1.00	2.31	5.68
NM_001108069	Serine/threonine kinase 11	Stk11	1.23	10.93	5.32
NM_023968	Neuropeptide Y receptor Y2	Npy2r	1.65	3.58	5.22
NM_022696	Heart and neural crest derivatives expressed 2	Hand2	0.88	4.27	4.42
NM_001109892	Fibroblast growth factor receptor 2	Fgfr2	1.26	2.70	4.30
NM_021659	Synaptotagmin VII	Syt7	0.69	4.49	4.30
NM_134336	Neuroigin 3	Nlgn3	1.62	3.28	4.04
NM_019166	Synaptogyrin 1	Syng1	1.57	2.83	3.88
NM_012996	Oxytocin, prepropeptide	Oxt	0.91	4.78	3.86
NM_001042579	Unc-13 homolog B	Unc13b	1.21	3.24	3.79
NM_001110099	Ret proto-oncogene	Ret	1.67	4.48	3.67
NM_031739	Potassium voltage-gated channel, Shal-related subfamily, Kcnd3 member 3	Kcnd3	0.96	3.75	3.64
NM_012531	Catechol-O-methyltransferase	Comt	0.97	3.86	3.50
NM_022684	BH3 interacting domain death agonist	Bid	1.02	2.80	3.48
NM_017254	5-hydroxytryptamine (serotonin) receptor 2A	Htr2a	1.13	3.26	3.34
NM_153621	Disabled homolog 1	Dab1	0.45	2.85	3.28
NM_012715	Adrenomedullin	Adm	1.22	2.01	3.24
NM_021584	Doublecortin-like kinase 1	Dclk1	1.11	3.98	3.18
NM_012568	Glycine receptor, alpha 2	Glr2	1.84	2.42	3.14
NM_001108880	BARX homeobox 1	Barx1	1.17	3.72	3.09
NM_013193	Neurofibromin 2	Nf2	1.61	3.08	3.08
NM_024401	Advillin	Avil	1.76	2.74	3.06
NM_031140	Vimentin	Vim	1.65	2.82	2.99
NM_024160	Cytochrome b-245, alpha polypeptide	Cyba	0.93	3.21	2.98
NM_031588	Neuregulin 1	Nrg1	0.82	2.44	2.79
NM_053613	Reticulon 4 receptor	Rtn4r	0.99	2.88	2.72
NM_053724	Glycine receptor, alpha 3	Glr3	1.15	2.05	2.71
NM_001002827	Notch homolog 4	Notch4	1.10	4.25	2.70

NM_019359	Calponin 3, acidic	Cnn3	1.11	3.64	2.67
NM_012944	Dopamine receptor D4	Drd4	0.46	4.21	2.64
NM_022631	Wingless-type MMTV integration site family, member 5A	Wnt5a	1.72	2.38	2.60
NM_022239	Neuromedin U	Nmu	0.60	2.89	2.55
NM_031632	Caspase 9, apoptosis-related cysteine peptidase	Casp9	1.60	2.24	2.50
NM_138977	Prokineticin receptor 1	Prokr1	1.02	2.51	2.48
XM_001077495	Nuclear receptor co-repressor 1	Ncor1	0.69	2.28	2.32
NM_023971	Dystrophin related protein 2	Drp2	1.04	2.80	2.32
NM_022384	Achaete-scute complex homolog 1	Ascl1	1.51	2.53	2.31
NM_138918	Synovial sarcoma translocation gene on chromosome 18-like 1	Ss18l1	1.30	3.80	2.27
NM_012877	Sodium channel, voltage-gated, type II, beta	Scn2b	1.02	3.32	2.27
NM_031558	Steroidogenic acute regulatory protein	Star	1.70	2.07	2.22
NM_019302	v-Crk sarcoma virus CT10 oncogene homolog	Crk	1.13	2.71	2.21
NM_031828	Potassium large conductance calcium-activated channel, subfamily M, alpha member 1	Kcnma1	1.03	2.29	2.18
XM_001062926	Aldehyde dehydrogenase 5 family, member A1	Aldh5a1	1.28	2.38	2.14
NM_001191609	Laminin, alpha 5	Lama5	1.69	2.65	2.14
NM_053810	Synaptosomal-associated protein 29	Snap29	1.50	2.94	2.10
NM_138529	Neuron navigator 2	Nav2	1.32	3.12	2.08
NM_031343	Solute carrier family 6 (neurotransmitter transporter, noradrenalin), member 2	Slc6a2	1.84	2.39	2.03
NM_030860	Myocyte enhancer factor 2D	Mef2d	0.98	3.16	2.00
100, 1000 ppm commonly down-regulated (18 genes)					
NM_052803	ATPase, Cu <sup>++</sup> transporting, alpha polypeptide	Atp7a	0.94	0.33	0.16
NM_001106055	MYC binding protein 2	Mycbp2	1.00	0.30	0.19
NM_030584	Sclerosteosis	Sost	0.57	0.46	0.23
NM_001035000	Histone deacetylase 10	Hdac10	1.15	0.33	0.29
NM_022692	RAB5A, member RAS oncogene family	Rab5a	1.04	0.46	0.29
NM_019328	Nuclear receptor subfamily 4, group A, member 2	Nr4a2	0.93	0.47	0.34
NM_001112742	Glutamate receptor, ionotropic, AMPA 3	Gria3	1.03	0.33	0.35
NM_001124768	Tachykinin 1	Tac1	1.25	0.38	0.37
NM_053903	Ephrin A5	EfnA5	0.84	0.39	0.38
NM_053927	Erythrocyte protein band 4.1-like 3	Epb4.113	0.68	0.41	0.41
NM_053817	Neurexin 3	Nrxn3	1.09	0.49	0.42
NM_053457	Claudin 11	Cldn11	0.99	0.49	0.42
NM_013107	Bone morphogenetic protein 6	Bmp6	1.60	0.48	0.43
NM_019374	Prodynorphin	Pdyn	0.95	0.49	0.44
NM_001106779	Neural precursor cell expressed, developmentally down-regulated 1	Nedd1	1.01	0.47	0.46
NM_030871	Phosphodiesterase 1A, calmodulin-dependent	Pde1a	1.55	0.22	0.46
NM_012547	Dopamine receptor D2	Drd2	1.08	0.46	0.46
NM_012800	Purinergic receptor P2Y, G-protein coupled, 1	P2ry1	1.21	0.45	0.50

Abbreviations: DBDE, decabromodiphenyl ether.