

## Supplementary Information

**Table S1**

**Supplementary Table 1:** List of neuronal genes regulated in exosome-dependent fashion as detected by microarray analysis (Illumina BeadArray Mouse v2 microarray platform). The RNA profiles of neurons exposed in Boyden chamber co-culture to exosomes, and neurons cultured with exosome-depleted pOL-conditioned medium were compared. Significantly regulated genes are depicted down to a false discovery rate (FDR) of 20% (n=4). The logFC value is the logarithmic representation of the fold change (FC) value. The candidate genes displayed in red were further validated by qRT-PCR.

ID	Symbol	Description	logFC	FDR (p-value)
ILMN_2737200	Mbp	myelin basic protein	0,87	1.79e-07
ILMN_1216764	Ier3	immediate early response 3	-0,52	1.48e-04
ILMN_1221503	Ccnd1	cyclin D1	-0,52	1.48e-04
ILMN_2601471	Ccnd1	cyclin D1	-0,47	3.10e-03
ILMN_2836654	NA	NA	-0,46	3.10e-03
ILMN_2929896	Pbk	PDZ binding kinase	-0,42	3.10e-03
ILMN_2955725	Cort	cortistatin	-0,44	3.10e-03
ILMN_1226607	Cort	cortistatin	-0,42	3.10e-03
ILMN_2739843	Metrn	meteorin, glial cell differentiation regulator	-0,42	3.10e-03
ILMN_2795040	NA	NA	-0,45	4.06e-03
ILMN_1219574	Hist1h2af	histone cluster 1, H2af	-0,46	4.11e-03
ILMN_2634520	Ctnnd2	catenin (cadherin associated protein), delta 2	0,41	4.20e-03
ILMN_1236574	Cenpa	centromere protein A	-0,4	4.25e-03
ILMN_1234112	Tomm70a	translocase of outer mitochondrial membrane 70 homolog A (yeast)	0,39	9.30e-03
ILMN_3112526	Ldb2	LIM domain binding 2	0,39	1.30e-02
ILMN_2754435	Ldb2	LIM domain binding 2	0,38	1.44e-02
ILMN_1220100	Ywhae	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide	0,38	1.93e-02
ILMN_2925923	Vgf	VGF nerve growth factor inducible	-0,36	2.52e-02
ILMN_1225182	Cdca3	cell division cycle associated 3	-0,4	2.67e-02
ILMN_2933022	Plekhb1	pleckstrin homology domain containing, family B (evectins) member 1	-0,38	2.67e-02
ILMN_2847144	Hist1h2ak	histone cluster 1, H2ak	-0,42	2.86e-02
ILMN_2693895	Acta2	actin, alpha 2, smooth muscle, aorta	0,60	2.92e-02
ILMN_3128907	Cd63	CD63 antigen	-0,36	3.06e-02
ILMN_2617468	Chac1	ChaC, cation transport regulator 1	-0,37	3.36e-02
ILMN_2662264	Bcas1	breast carcinoma amplified sequence 1	0,37	4.60e-02
ILMN_2670398	Eif4ebp1	eukaryotic translation initiation factor 4E binding protein 1	-0,35	4.64e-02
ILMN_2644008	Chl1	cell adhesion molecule with homology to L1CAM	0,34	4.72e-02
ILMN_2652909	Ddit3	DNA-damage inducible transcript 3	-0,35	4.87e-02
ILMN_2591440	Ccrn4l	CCR4 carbon catabolite repression 4-like ( <i>S. cerevisiae</i> )	0,33	5.36e-02
ILMN_2627557	Tbc1d19	TBC1 domain family, member 19	0,34	5.75e-02
ILMN_1257987	Slc7a3	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3	-0,33	6.00e-02

ILMN_1260082	Asphd1	aspartate beta-hydroxylase domain containing 1	-0,34	7.02e-02
ILMN_2601884	Gpcpd1	glycerophosphocholine phosphodiesterase GDE1 homolog (S. cerevisiae)	0,32	7.11e-02
ILMN_2657844	Cdk1	cyclin-dependent kinase 1	-0,32	7.45e-02
ILMN_2662450	Runx1t1	runt-related transcription factor 1; translocated to, 1 (cyclin D-related)	0,32	7.74e-02
ILMN_2669699	NA	NA	0,34	8.55e-02
ILMN_3161626	Prkag2	protein kinase, AMP-activated, gamma 2 non-catalytic subunit	0,31	1.06e-01
ILMN_2852957	Dkk3	dickkopf homolog 3 (Xenopus laevis)	0,31	1.13e-01
ILMN_2662926	Egr1	early growth response 1	0,51	1.17e-01
ILMN_1245335	Neur1b	neuralized homolog 1b (Drosophila)	0,33	1.17e-01
ILMN_2722938	Ppp1r15a	protein phosphatase 1, regulatory (inhibitor) subunit 15A	-0,31	1.20e-01
ILMN_2693922	Egfr	epidermal growth factor receptor	-0,31	1.21e-01
ILMN_2623216	Pgrmc1	progesterone receptor membrane component 1	0,31	1.21e-01
ILMN_1234072	Pdlim1	PDZ and LIM domain 1 (elfin)	-0,32	1.23e-01
ILMN_2512541	Ube2n	ubiquitin-conjugating enzyme E2N	0,31	1.27e-01
ILMN_1224333	Osbp11	oxysterol binding protein-like 11	0,33	1.27e-01
ILMN_3105417	Bdnf	brain derived neurotrophic factor	-0,33	1.28e-01
ILMN_1216042	Apoe	apolipoprotein E	-0,33	1.32e-01
ILMN_2632712	Birc5	baculoviral IAP repeat-containing 5	-0,32	1.41e-01
ILMN_2730329	Hist1h2ah	histone cluster 1, H2ah	-0,34	1.45e-01
ILMN_1228557	Id2	inhibitor of DNA binding 2	0,32	1.65e-01
ILMN_1248830	Hist1h2an	histone cluster 1, H2an	-0,35	1.65e-01
ILMN_2625167	Eif4g2	eukaryotic translation initiation factor 4, gamma 2	0,32	1.72e-01
ILMN_1247066	Caprin1	cell cycle associated protein 1	0,3	1.72e-01
ILMN_1225528	Trib3	tribbles homolog 3 (Drosophila)	-0,3	1.72e-01
ILMN_2762326	Kif22	kinesin family member 22	-0,33	1.72e-01
ILMN_1220409	Cetn2	centrin 2	0,33	1.79e-01
ILMN_1248892	Tmem184c	transmembrane protein 184C	0,3	1.79e-01
ILMN_2528345	Zfhx2	zinc finger homeobox 2	-0,32	1.90e-01
ILMN_2908070	Gtse1	G two S phase expressed protein 1	-0,32	1.92e-01
ILMN_2868280	Dcxr	dicarbonyl L-xylulose reductase	-0,29	1.92e-01
ILMN_2719202	Hist1h2bf	histone cluster 1, H2bf	-0,3	1.92e-01
ILMN_1255053	Plk1	polo-like kinase 1	-0,31	1.92e-01
ILMN_2647627	Ppp1cb	protein phosphatase 1, catalytic subunit, beta isoform	0,31	1.93e-01
ILMN_2886828	Rarb	retinoic acid receptor, beta	-0,3	1.96e-01
ILMN_2598420	Scaf8	SR-related CTD-associated factor 8	0,29	1.96e-01
ILMN_2751854	Ndr4	N-myc downstream regulated gene 4	0,31	1.96e-01
ILMN_1231710	Crhbp	corticotropin releasing hormone binding protein	-0,3	1.98e-01