

Supporting Information

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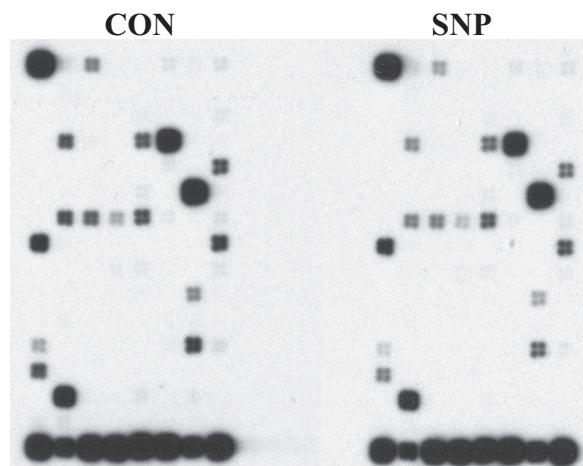


Fig. S1. Representative image of microarray OHS-031. (*Left*) Cerebral endothelial cells under normal conditions demonstrate baseline expression of many growth factors and receptors. (*Right*) Exposure to nonlethal levels of SNP broadly reduces expression levels of many growth factors and receptors systems.

Table S1. Nonlethal levels of SNP in cerebral endothelial cells reduces gene expression of many neurotrophins and neurotrophin receptors

Symbol	Ratio (SNP/CON)	Gene name
ARTN	0.48	Artemin
BDNF	0.62	Brain-derived neurotrophic factor
CNTF	N/A*	Ciliary neurotrophic factor
FGF2	0.36	Fibroblast growth factor 2 (basic)
FGF9	N/A	Fibroblast growth factor 9 (glia-activating factor)
FUS	0.93	Fusion (involved in t(12;16) in malignant liposarcoma)
GDNF	N/A	Glia cell derived neurotrophic factor
GMF β	0.63	Glia maturation factor, beta
NF1	N/A	Neurofibromin 1
NRG1	0.60	Neuregulin 1
NGF β	0.52	Nerve growth factor, beta polypeptide
NTF3	N/A	Neurotrophin 3
NTF5	0.46	Neurotrophin 5
CNTFR	N/A	Ciliary neurotrophic factor receptor
FGFR1	0.41	Fibroblast growth factor receptor 1
NGFR	0.62	Nerve growth factor receptor
TrkA	N/A	Neurotrophic tyrosine kinase receptor, type 1
TrkB	N/A	Neurotrophic tyrosine kinase receptor, type 2
TrkC	N/A	Neurotrophic tyrosine kinase receptor, type 3

*N/A, nonavailable for the genes with undetectable signal(s) in our system.

RPS27A	ADCYAP1R1	APAF1	ARTN	ATF2	BAX	BCL2	BDNF
1	2	3	4	5	6	7	8
C7orf9	CBLN1	CCKAR	CCKBR	CNTF	CNTFR	CRH	CRHBP
9	10	11	12	13	14	15	16
CRHR1	CRHR2	CX3CR1	CXCR4	ELK1	ETS1	F2	FGF2
17	18	19	20	21	22	23	24
FGF9	FGFR1	FOS	FRS2	FRS3	FUS	GALR1	GALR2
25	26	27	28	29	30	31	32
GALR3	GDNF	GFRA1	GFRA2	GFRA3	GFRA4	GHRH	GMFB
33	34	35	36	37	38	39	40
GMFG	GPR74	GRPR	HCRT	HCRT1	HCRT2	HSPB1	IL10
41	42	43	44	45	46	47	48
IL10RA	IL10RB	IL1B	IL1R1	IL6	IL6R	IL6ST	JUN
49	50	51	52	53	54	55	56
LIF	LIFR	NRG4	MAGED1	MC2R	MEF2C	MT3	MYC
57	58	59	60	61	62	63	64
NCOA1	NELL1	NF1	NGFB	NGFR	NGFRAP1	NMBR	NPFF
65	66	67	68	69	70	71	72
NPY	NPY1R	NPY2R	NPY5R	NPY6R	NR1I2	NRG1	NRG2
73	74	75	76	77	78	79	80
NTF3	NTF5	NTRK1	NTRK2	NTRK3	NTSR1	NTSR2	PENK
81	82	83	84	85	86	87	88
PNOC	PPYR1	PSPN	PTGER2	PTN	RPS6KA6	STAT1	STAT2
89	90	91	92	93	94	95	96
STAT3	STAT4	STAT5A	STAT5B	TAC1	TAC3	TACR1	TACR2
97	98	99	100	101	102	103	104
TACR3	TFG	TGFA	TGFB1	CD40	FAS	TP53	TRO
105	106	107	108	109	110	111	112
UCN	VGF	PUC18	Blank	Blank	AS1R2	AS1R1	AS1
113	114	115	116	117	118	119	120
GAPDH	B2M	HSPCB	HSPCB	ACTB	ACTB	BAS2C	BAS2C
121	122	123	124	125	126	127	128

Fig. S2. Layout of human neurotrophin and receptors GeArray OHS-031.