Supplementary file 1 – The effect of LPS on gene expression in PBMCs

****

Supplementary file 1a. probe sets without detectable mRNA amounts in PBMCs without LPS (absent calls in the arrays from all six untreated samples) but up-regulated in cells after LPS stimulation (present in the arrays of all six LPS-treated samples).

201195_s_at	SLC7A5	Hs.513797	solute carrier family 7 (cationic amino acid transporter, y+ system), member 5
201464_x_at	JUN	Hs.525704	v-jun sarcoma virus 17 oncogene homolog (avian)
201466_s_at	JUN	Hs.525704	v-jun sarcoma virus 17 oncogene homolog (avian)
201564_s_at	FSCN1	Hs.118400	fascin homolog 1, actin-bundling protein (Strongylocentrotus purpuratus)
201693_s_at	EGR1	Hs.326035	early growth response 1
201939_at	PLK2	Hs.398157	polo-like kinase 2 (Drosophila)
202067_s_at	LDLR	Hs.213289, Hs.580083	low density lipoprotein receptor (familial hypercholesterolemia)
202859_x_at	IL8	Hs.624, Hs.381219	interleukin 8
202871_at	TRAF4	Hs.8375	TNF receptor-associated factor 4
202988_s_at	RGS1	Hs.75256	regulator of G-protein signalling 1
204080_at	TOE1	Hs.271353, Hs.288198	target of EGR1, member 1 (nuclear)
204348_s_at	AK3L1	Hs.10862	adenylate kinase 3-like 1
204363_at	F3	Hs.62192	coagulation factor III (thromboplastin, tissue factor)
204413_at	TRAF2	Hs.522506	TNF receptor-associated factor 2
204896_s_at	PTGER4	Hs.199248	prostaglandin E receptor 4 (subtype EP4)
204958_at	PLK3	Hs.153640	polo-like kinase 3 (Drosophila)
205153_s_at	CD40	Hs.472860	CD40 antigen (TNF receptor superfamily member 5)
205193_at	MAFF	Hs.517617	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)
205249_at	EGR2	Hs.1395	early growth response 2 (Krox-20 homolog, Drosophila)
205476_at	CCL20	Hs.75498	chemokine (C-C motif) ligand 20
205569_at	LAMP3	Hs.518448	lysosomal-associated membrane protein 3
205973_at	FEZ1	Hs.224008	fasciculation and elongation protein zeta 1 (zygin I)
206173_x_at	GABPB2	Hs.569490	GA binding protein transcription factor, beta subunit 2
206359_at	SOCS3	Hs.527973	suppressor of cytokine signaling 3
206360_s_at	SOCS3	Hs.527973	suppressor of cytokine signaling 3
206975_at	LTA	Hs.36	lymphotoxin alpha (TNF superfamily, member 1)
207442_at	CSF3	Hs.2233	colony stimulating factor 3 (granulocyte)
207850_at	CXCL3	Hs.89690	chemokine (C-X-C motif) ligand 3
207978_s_at	NR4A3	Hs.279522	nuclear receptor subfamily 4, group A, member 3
208173_at	IFNB1	Hs.93177	interferon, beta 1, fibroblast
209324_s_at	RGS16	Hs.413297	regulator of G-protein signalling 16
209774_x_at	CXCL2	Hs.75765	chemokine (C-X-C motif) ligand 2
209803_s_at	PHLDA2	Hs.154036	pleckstrin homology-like domain, family A, member 2
209850_s_at	CDC42EP2	Hs.343380	CDC42 effector protein (Rho GTPase binding) 2
210118_s_at	IL1A	Hs.1722	interleukin 1, alpha
210662_at	KYNU	Hs.470126	kynureninase (L-kynurenine hydrolase)
210953_at	TSC22D2	Hs.52526	TSC22 domain family, member 2
211122_s_at	CXCL11	Hs.518814	chemokine (C-X-C motif) ligand 11
211506_s_at	IL8	Hs.624, Hs.381219	interleukin 8
213568_at	OSR2	Hs.253247	odd-skipped related 2 (Drosophila)
213758_at	COX4I1	Hs.433419	cytochrome c oxidase subunit IV isoform 1
214062_x_at	NFKBIB	Hs.9731	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta
214446_at	ELL2	Hs.192221	elongation factor, RNA polymerase II, 2
214448_x_at	NFKBIB	Hs.9731	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta
215078_at	SOD2	Hs.487046, Hs.589976	superoxide dismutase 2, mitochondrial
215462_at	LOC149478	Hs.421430	
215853_at	SDCCAG8	Hs.555913	serologically defined colon cancer antigen 8
216248_s_at	NR4A2	Hs.165258	nuclear receptor subfamily 4, group A, member 2
216834_at	RGS1	Hs.75256	regulator of G-protein signalling 1
217173_s_at	LDLR	Hs.213289, Hs.580083	low density lipoprotein receptor (familial hypercholesterolemia)
219258_at	FLJ20516	Hs.426696	
220322_at	IL1F9	Hs.211238	interleukin 1 family, member 9
220655_at	TNIP3	Hs.208206	TNFAIP3 interacting protein 3
220882_at			
221143_at	RPA4	Hs.534452	replication protein A4, 34kDa
221877_at			
222068_s_at	LRRC50	Hs.310164	leucine rich repeat containing 50
222301_at	C1orf61	Hs.380027	chromosome 1 open reading frame 61
38158_at	ESPL1	Hs.153479	extra spindle poles like 1 (S. cerevisiae)
41469_at	PI3	Hs.112341	peptidase inhibitor 3, skin-derived (SKALP)

Supplementary file 1b. Probe sets with present calls in cells that were not treated with LPS (present in all six arrays), but no detectable mRNA signals in all arrays from LPS-stimulated PBMCs.

201420_s_at	WDR77	Hs.204773	WD repeat domain 77
201896_s_at	PSRC1	Hs.405925	proline/serine-rich coiled-coil 1
202512_s_at	ATG5	Hs.486063	ATG5 autophagy related 5 homolog (S. cerevisiae)
203128_at	SPTLC2	Hs.435661	serine palmitoyltransferase, long chain base subunit 2
203245_s_at	TUSC4	Hs.437083	tumor suppressor candidate 4
203720_s_at	ERCC1	Hs.435981	excision repair cross-complementing rodent repair deficiency, complementation group 1
204227_s_at	TK2	Hs.512619	thymidine kinase 2, mitochondrial
204247_s_at	CDK5	Hs.166071	cyclin-dependent kinase 5
204301_at	KBTBD11	Hs.5333	kelch repeat and BTB (POZ) domain containing 11
204554_at	PPP1R3D	Hs.42215	protein phosphatase 1, regulatory subunit 3D
204982_at	GIT2	Hs.434996	G protein-coupled receptor kinase interactor 2
205960_at	PDK4	Hs.8364	pyruvate dehydrogenase kinase, isozyme 4
206037_at	CCBL1	Hs.495250	c("cysteine conjugate-beta lyase", " cytoplasmic (glutamine transaminase K, kyneurenine aminotransferase)")
208466_at	RAB3D	Hs.567397	RAB3D, member RAS oncogene family
209264_s_at	TSPAN4	Hs.26518	tetraspanin 4
209759_s_at	DCI	Hs.403436	dodecenoyl-Coenzyme A delta isomerase (3,2 trans-enoyl-Coenzyme A isomerase)
210220_at	FZD2	Hs.142912	frizzled homolog 2 (Drosophila)
210306_at	L3MBTL	Hs.300863	l(3)mbt-like (Drosophila)
212845_at	SAMD4A	Hs.98259	sterile alpha motif domain containing 4A
213131_at	OLFM1	Hs.522484	olfactomedin 1
213351_s_at	TMCC1	Hs.477547	transmembrane and coiled-coil domain family 1
214793_at	DUSP7	Hs.3843	dual specificity phosphatase 7
214947_at	FAM105A	Hs.155085	family with sequence similarity 105, member A
215232_at	KIAA0672	Hs.499758	
215253_s_at	DSCR1	Hs.282326	Down syndrome critical region gene 1
216733_s_at	GATM	Hs.75335	glycine amidinotransferase (L-arginine:glycine amidinotransferase)
218115_at	ASF1B	Hs.26516	ASF1 anti-silencing function 1 homolog B (S. cerevisiae)
218504_at	FAHD2A	Hs.546387	fumarylacetoacetate hydrolase domain containing 2A
218689_at	FANCF	Hs.523543	Fanconi anemia, complementation group F
218953_s_at	MGC3265	Hs.483796	
219344_at	SLC29A3	Hs.438419	solute carrier family 29 (nucleoside transporters), member 3
219496_at	C2orf26	Hs.355455	chromosome 2 open reading frame 26
219714_s_at	CACNA2D3	Hs.128594	calcium channel, voltage-dependent, alpha 2/delta 3 subunit
220326_s_at	FLJ10357	Hs.35125	
220936_s_at	H2AFJ	Hs.524280	H2A histone family, member J
222058_at	RNF130	Hs.484363	ring finger protein 130

Supplementary file 1c. Genes that were most strongly affected by LPS treatment (absolute logFC > 4). Gene expression upon LPS was compared with base level gene expression in control samples. In cells from stroke survivors all these genes had absolute logFC > 4, too (similar logFC values and ranking).

	logFC			
205476_at	10,75	CCL20	Hs.75498	chemokine (C-C motif) ligand 20
211506_s_at	10,35	IL8	Hs.624, Hs.381219	interleukin 8
206025_s_at	9,92	TNFAIP6	Hs.437322	tumor necrosis factor, alpha-induced protein 6
209774_x_at	9,68	CXCL2	Hs.75765	chemokine (C-X-C motif) ligand 2
202859_x_at	9,54	IL8	Hs.624, Hs.381219	interleukin 8
205207_at	9,54	IL6	Hs.512234	interleukin 6 (interferon, beta 2)
210118_s_at	9,44	IL1A	Hs.1722	interleukin 1, alpha
207850_at	9,3	CXCL3	Hs.89690	chemokine (C-X-C motif) ligand 3
206026_s_at	8,93	TNFAIP6	Hs.437322	tumor necrosis factor, alpha-induced protein 6
204470_at	8,5	CXCL1	Hs.789	chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
213524_s_at	8,5	G0S2	Hs.432132	G0/G1switch 2
39402_at	8,26	IL1B	Hs.126256	interleukin 1, beta
206157_at	8,26	PTX3	Hs.567326	pentraxin-related gene, rapidly induced by IL-1 beta
205067_at	8,09	IL1B	Hs.126256	interleukin 1, beta
221345_at	7,97	FFAR2	Hs.248056	free fatty acid receptor 2
207113_s_at	7,62	TNF	Hs.241570	tumor necrosis factor (TNF superfamily, member 2)
205114_s_at	7,04	CCL3	Hs.514107	chemokine (C-C motif) ligand 3
204440_at	6,94	CD83	Hs.484703	CD83 antigen (activated B lymphocytes, immunoglobulin superfamily)
211434_s_at	6,83	CCRL2	Hs.458436, Hs.535713	chemokine (C-C motif) receptor-like 2
215078_at	6,79	SOD2	Hs.487046, Hs.589976	superoxide dismutase 2, mitochondrial
207901_at	6,72	IL12B	Hs.674	interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
36711_at	6,59	MAFF	Hs.517617	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)
204748_at	6,52	PTGS2	Hs.196384	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
214349_at	6,5			
201694_s_at	6,42	EGR1	Hs.326035	early growth response 1
204533_at	6,06	CXCL10	Hs.413924	chemokine (C-X-C motif) ligand 10
202912_at	6,05	ADM	Hs.441047	adrenomedullin
212659_s_at	5,99	IL1RN	Hs.81134	interleukin 1 receptor antagonist
220882_at	5,94			
220655_at	5,94	TNIP3	Hs.208206	TNFAIP3 interacting protein 3
205220_at	5,91	GPR109B	Hs.458425	G protein-coupled receptor 109B
210354_at	5,86	IFNG	Hs.856	interferon, gamma
222301_at	5,72	C1orf61	Hs.380027	chromosome 1 open reading frame 61
216243_s_at	5,63	IL1RN	Hs.81134	interleukin 1 receptor antagonist
202638_s_at	5,53	ICAM1	Hs.515126, Hs.579817	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor
202014_at	5,52	PPP1R15A	Hs.76556	protein phosphatase 1, regulatory (inhibitor) subunit 15A
212657_s_at	5,48	IL1RN	Hs.81134	interleukin 1 receptor antagonist
203394_s_at	5,22	HES1	Hs.250666	hairy and enhancer of split 1, (Drosophila)
206765_at	5,16	KCNJ2	Hs.1547	potassium inwardly-rectifying channel, subfamily J, member 2
218810_at	5,12	ZC3H12A	Hs.471918	zinc finger CCCH-type containing 12A
222068_s_at	5,1	LRRC50	Hs.310164	leucine rich repeat containing 50
204363_at	5,1	F3	Hs.62192	coagulation factor III (thromboplastin, tissue factor)
37028_at	5,04	PPP1R15A	Hs.76556	protein phosphatase 1, regulatory (inhibitor) subunit 15A
207794_at	-5,02	CCR2	Hs.395, Hs.511794	chemokine (C-C motif) receptor 2
205193_at	4,97	MAFF	Hs.517617	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)
202071_at	4,94	SDC4	Hs.252189	syndecan 4 (amphiglycan, ryudocan)
201631_s_at	4,93	IER3	Hs.76095	immediate early response 3
220054_at	4,84	IL23A	Hs.98309	interleukin 23, alpha subunit p19
201693_s_at	4,77	EGR1	Hs.326035	early growth response 1
205767_at	4,73	EREG	Hs.115263	epiregulin
206359_at	4,7	SOCS3	Hs.527973	suppressor of cytokine signaling 3
202637_s_at	4,69	ICAM1	Hs.515126, Hs.579817	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor
204103_at	4,57	CCL4	Hs.75703	chemokine (C-C motif) ligand 4
201464_x_at	4,53	JUN	Hs.525704	v-jun sarcoma virus 17 oncogene homolog (avian)
208173_at	4,51	IFNB1	Hs.93177	interferon, beta 1, fibroblast
202672_s_at	4,46	ATF3	Hs.460	activating transcription factor 3
219312_s_at	4,36	ZBTB10	Hs.205742	zinc finger and BTB domain containing 10
215485_s_at	4,34	ICAM1	Hs.515126, Hs.57981	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor
204614_at	4,24	SERPINB2	Hs.514913	serpin peptidase inhibitor, clade B (ovalbumin), member 2
204794_at	4,23	DUSP2	Hs.1183	dual specificity phosphatase 2
202643_s_at	4,21	TNFAIP3	Hs.211600	tumor necrosis factor, alpha-induced protein 3
201195_s_at	4,19	SLC7A5	Hs.513797	solute carrier family 7 (cationic amino acid transporter, y+ system), member 5
212099_at	-4,07	RHOB	Hs.502876	ras homolog gene family, member B

Supplementary file 1d. Probe sets with absolute logFC > 4 in a comparison of survivors (LPS treated versus untreated cells), that did not show an absolute logFC > 4 in control subjects.

	logFC			
214746_s_at	-5,25	ZNF467	Hs.112158	zinc finger protein 467
216834_at	4,96	RGS1	Hs.75256	regulator of G-protein signalling 1
203096_s_at	4,82	RAPGEF2	Hs.113912	Rap guanine nucleotide exchange factor (GEF) 2
211122_s_at	4,62	CXCL11	Hs.518814	chemokine (C-X-C motif) ligand 11
205569_at	4,58	LAMP3	Hs.518448	lysosomal-associated membrane protein 3
204285_s_at	4,57	PMAIP1	Hs.96	phorbol-12-myristate-13-acetate-induced protein 1
209803_s_at	4,57	PHLDA2	Hs.154036	pleckstrin homology-like domain, family A, member 2
204286_s_at	4,56	PMAIP1	Hs.96	phorbol-12-myristate-13-acetate-induced protein 1
205249_at	4,49	EGR2	Hs.1395	early growth response 2 (Krox-20 homolog, Drosophila)
216015_s_at	4,48	CIAS1	Hs.159483	cold autoinflammatory syndrome 1
203504_s_at	4,47	ABCA1	Hs.429294, Hs.522675	ATP-binding cassette, sub-family A (ABC1), member 1
220322_at	4,43	IL1F9	Hs.211238	interleukin 1 family, member 9
205205_at	4,4	RELB	Hs.307905	v-rel reticuloendotheliosis viral oncogene homolog B, nuclear factor of kappa light polypeptide gene enhancer in B-cells 3 (avian)
205660_at	4,35	OASL	Hs.118633	2'-5'-oligoadenylate synthetase-like
205306_x_at	4,34	KMO	Hs.409081	kynurenine 3-monooxygenase (kynurenine 3-hydroxylase)
211138_s_at	4,25	KMO	Hs.409081	kynurenine 3-monooxygenase (kynurenine 3-hydroxylase)
219869_s_at	4,25	SLC39A8	Hs.288034	solute carrier family 39 (zinc transporter), member 8
217502_at	4,12	IFIT2	Hs.437609	interferon-induced protein with tetratricopeptide repeats 2
206978_at	-4,11	CCR2	Hs.395, Hs.511794	chemokine (C-C motif) receptor 2
207075_at	4,06	CIAS1	Hs.159483	cold autoinflammatory syndrome 1
209267_s_at	4,05	SLC39A8	Hs.288034	solute carrier family 39 (zinc transporter), member 8
201564_s_at	4,04	FSCN1	Hs.118400	fascin homolog 1, actin-bundling protein (Strongylocentrotus purpuratus)
210933_s_at	4,04	MGC4655	Hs.555997	
209305_s_at	4,03	GADD45B	Hs.110571	growth arrest and DNA-damage-inducible, beta

Supplementary file 2. Differential base level gene expression and LPS-responsiveness in PBMCs of stroke survivors and control subjects – analysis of single probe sets

****

Supplementary file 2a. Probe sets with absolute logFC > 1 (comparison between survivors and controls). Base level gene expression

	logFC	p-value			
206700_s_at	2,56	0,08	SMCY	Hs.80358	Smcy homolog, Y-linked (mouse)
205000_at	2,39	0,05	DDX3Y	Hs.99120	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked
204409_s_at	1,96	0,04	EIF1AY	Hs.461178	eukaryotic translation initiation factor 1A, Y-linked
201909_at	1,83	0,09	RPS4Y1	Hs.282376	ribosomal protein S4, Y-linked 1
214218_s_at	-1,74	0,05	XIST	Hs.529901	X (inactive)-specific transcript
221728_x_at	-1,61	0,08	XIST	Hs.529901	X (inactive)-specific transcript
201123_s_at	1,57	0,07	EIF5A	Hs.534314	eukaryotic translation initiation factor 5A
214055_x_at	-1,45	0,25	BAT2D1	Hs.494614	BAT2 domain containing 1
210790_s_at	-1,44	0,02	SAR1A	Hs.499960	SAR1 gene homolog A (S. cerevisiae)
205033_s_at	1,43	0,25	DEFA1	Hs.294176, Hs.380781	defensin, alpha 1
204848_x_at	-1,3	0,16	HBG1	Hs.302145, Hs.567283	hemoglobin, gamma A
204419_x_at	-1,27	0,15	HBG2	Hs.302145	hemoglobin, gamma G
211948_x_at	-1,27	0,25	BAT2D1	Hs.494614	BAT2 domain containing 1
213756_s_at	1,22	0,02	HSF1	Hs.406068, Hs.530227	heat shock transcription factor 1
219629_at	1,22	0,28	C22orf8	Hs.265018, Hs.589548	chromosome 22 open reading frame 8
220342_x_at	-1,2	0,16			
204351_at	1,2	0,12	S100P	Hs.2962	S100 calcium binding protein P
207824_s_at	1,17	0,03	MAZ	Hs.23650	MYC-associated zinc finger protein (purine-binding transcription factor)
216629_at	1,15	0,1	SRRM2	Hs.433343, Hs.525557	serine/arginine repetitive matrix 2
217412_at	-1,04	0,13			
214833_at	-1,02	0,05	TMEM63A	Hs.119387	transmembrane protein 63A
201730_s_at	-1,02	0,27	TPR	Hs.279640	translocated promoter region (to activated MET oncogene)
209569_x_at	-1,01	0,16	D4S234E	Hs.518595	

Supplementary file 2b. Probe sets with absolute logFC > 1 (comparison between survivors and controls). LPS-responsiveness.

	logFC	p-value			
211122_s_at	3,13	0,03	CXCL11	Hs.518814	chemokine (C-X-C motif) ligand 11
213568_at	2,13	0	OSR2	Hs.253247	odd-skipped related 2 (Drosophila)
34478_at	-2,1	0,19	RAB11B	Hs.433888	RAB11B, member RAS oncogene family
217176_s_at	2,09	0,03	ZFX	Hs.370424	zinc finger protein, X-linked
207442_at	2,07	0,03	CSF3	Hs.2233	colony stimulating factor 3 (granulocyte)
207824_s_at	-2,05	0,05	MAZ	Hs.23650	MYC-associated zinc finger protein (purine-binding transcription factor)
212458_at	2,04	0,1	SPRED2	Hs.59332	sprouty-related, EVH1 domain containing 2
214149_s_at	-1,93	0,13	ATP6V0E	Hs.484188	ATPase, H+ transporting, lysosomal 9kDa, V0 subunit e
211139_s_at	1,92	0,05	NAB1	Hs.107474	NGFI-A binding protein 1 (EGR1 binding protein 1)
206134_at	1,92	0,25	ADAMDEC1	Hs.521459	ADAM-like, decysin 1
216629_at	-1,83	0,18	SRRM2	Hs.433343, Hs.525557	serine/arginine repetitive matrix 2
213756_s_at	-1,82	0,04	HSF1	Hs.406068, Hs.530227	heat shock transcription factor 1
201627_s_at	1,8	0	INSIG1	Hs.520819	insulin induced gene 1
213797_at	1,77	0,23	RSAD2	Hs.17518	radical S-adenosyl methionine domain containing 2
205249_at	1,74	0,04	EGR2	Hs.1395	early growth response 2 (Krox-20 homolog, Drosophila)
210163_at	1,68	0,27	CXCL11	Hs.518814	chemokine (C-X-C motif) ligand 11
220342_x_at	1,68	0,07			
204439_at	1,67	0,13	IFI44L	Hs.389724	interferon-induced protein 44-like
201559_s_at	1,66	0,06	CLIC4	Hs.440544	chloride intracellular channel 4
201167_x_at	-1,64	0,13	ARHGDIA	Hs.159161	Rho GDP dissociation inhibitor (GDI) alpha
219312_s_at	1,62	0,05	ZBTB10	Hs.205742	zinc finger and BTB domain containing 10
41469_at	1,61	0,48	PI3	Hs.112341	peptidase inhibitor 3, skin-derived (SKALP)
213606_s_at	-1,59	0,14	ARHGDIA	Hs.159161	Rho GDP dissociation inhibitor (GDI) alpha
212952_at	-1,57	0,1	CALR	Hs.507541, Hs.515162	calreticulin
216834_at	1,57	0,19	RGS1	Hs.75256	regulator of G-protein signalling 1
210662_at	1,56	0,05	KYNU	Hs.470126	kynureninase (L-kynurenine hydrolase)
216056_at	1,55	0,36	CD44	Hs.459142, Hs.502328	CD44 antigen (Indian blood group)
203213_at	1,52	0,08	CDC2	Hs.334562	cell division cycle 2, G1 to S and G2 to M
214370_at	-1,51	0,35	S100A8	Hs.416073	S100 calcium binding protein A8 (calgranulin A)
221419_s_at	-1,49	0,32	DUSP23	Hs.425801	dual specificity phosphatase 23
207425_s_at	-1,49	0,13	SEPT9	Hs.440932	septin 9
217793_at	-1,48	0,16	RAB11B	Hs.433888	RAB11B, member RAS oncogene family
209629_s_at	1,48	0,02	NXT2	Hs.25010	nuclear transport factor 2-like export factor 2
220322_at	1,46	0,3	IL1F9	Hs.211238	interleukin 1 family, member 9
201625_s_at	1,43	0,02	INSIG1	Hs.520819	insulin induced gene 1
221851_at	-1,41	0,04	LOC90379	Hs.443636	
210004_at	1,41	0,31	OLR1	Hs.412484	oxidised low density lipoprotein (lectin-like) receptor 1
203096_s_at	1,39	0,1	RAPGEF2	Hs.113912	Rap guanine nucleotide exchange factor (GEF) 2
207674_at	1,38	0,12	FCAR	Hs.193122	Fc fragment of IgA, receptor for
210818_s_at	1,38	0,08	BACH1	Hs.154276	BTB and CNC homology 1, basic leucine zipper transcription factor 1
205307_s_at	1,36	0,01	KMO	Hs.409081	kynurenine 3-monooxygenase (kynurenine 3-hydroxylase)
218010_x_at	-1,32	0,15	C20orf149	Hs.79625	chromosome 20 open reading frame 149
214059_at	1,32	0,17	IFI44	Hs.82316	interferon-induced protein 44
221078_s_at	1,32	0,1	KIAA1212	Hs.292925, Hs.567537	KIAA1212
206295_at	1,3	0,09	IL18	Hs.83077	interleukin 18 (interferon-gamma-inducing factor)
206675_s_at	1,29	0,06	SKIL	Hs.536655	SKI-like
206700_s_at	-1,28	0,25	SMCY	Hs.80358	Smcy homolog, Y-linked (mouse)
204747_at	1,28	0,18	IFIT3	Hs.47338	interferon-induced protein with tetratricopeptide repeats 3
214746_s_at	-1,27	0,13	ZNF467	Hs.112158	zinc finger protein 467
202988_s_at	1,26	0,14	RGS1	Hs.75256	regulator of G-protein signalling 1
214001_x_at	-1,26	0,42	FLJ20294	Hs.584932	
207798_s_at	-1,25	0,03	ATXN2L	Hs.460499	ataxin 2-like
36829_at	-1,24	0,03	PER1	Hs.445534	period homolog 1 (Drosophila)
203751_x_at	-1,24	0,04	JUND	Hs.2780	jun D proto-oncogene
209281_s_at	1,24	0,09	ATP2B1	Hs.506276	ATPase, Ca++ transporting, plasma membrane 1
205179_s_at	-1,24	0,13	ADAM8	Hs.501574	ADAM metallopeptidase domain 8
211823_s_at	-1,24	0,01	PXN	Hs.446336	paxillin
207901_at	1,24	0,12	IL12B	Hs.674	interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
203504_s_at	1,23	0,15	ABCA1	Hs.429294, Hs.522675	ATP-binding cassette, sub-family A (ABC1), member 1
210458_s_at	1,23	0,08	TANK	Hs.132257	TRAF family member-associated NFKB activator
205660_at	1,22	0,13	OASL	Hs.118633	2'-5'-oligoadenylate synthetase-like
203810_at	1,22	0,01	DNAJB4	Hs.380282	DnaJ (Hsp40) homolog, subfamily B, member 4
212979_s_at	1,22	0,04	KIAA0738	Hs.406492	
210692_s_at	1,21	0,13	SLC43A3	Hs.99962	solute carrier family 43, member 3
201879_at	1,21	0,06	ARIH1	Hs.268787	ariadne homolog, ubiquitin-conjugating enzyme E2 binding protein, 1 (Drosophila)

214792_x_at	-1,21	0,16	VAMP2	Hs.25348	vesicle-associated membrane protein 2 (synaptobrevin 2)
204614_at	1,21	0,07	SERPINB2	Hs.514913	serpin peptidase inhibitor, clade B (ovalbumin), member 2
201556_s_at	-1,2	0,18	VAMP2	Hs.25348	vesicle-associated membrane protein 2 (synaptobrevin 2)
200935_at	-1,2	0,15	CALR	Hs.507541, Hs.515162	calreticulin
212572_at	1,18	0,2	STK38L	Hs.184523	serine/threonine kinase 38 like
219017_at	1,18	0,01	ETNK1	Hs.29464, Hs.584930	ethanolamine kinase 1
201295_s_at	1,17	0,24	WSB1	Hs.446017	WD repeat and SOCS box-containing 1
217966_s_at	1,17	0,12	C1orf24	Hs.518662	chromosome 1 open reading frame 24
219869_s_at	1,17	0,28	SLC39A8	Hs.288034	solute carrier family 39 (zinc transporter), member 8
210571_s_at	1,17	0,04	CMAH	Hs.484918	cytidine monophosphate-N-acetylneuraminic acid hydroxylase (CMP-N-acetylneuraminate monooxygenase)
201909_at	-1,16	0,16	RPS4Y1	Hs.282376	ribosomal protein S4, Y-linked 1
210790_s_at	1,16	0,02	SAR1A	Hs.499960	SAR1 gene homolog A (S. cerevisiae)
206620_at	-1,16	0,11	GRAP	Hs.567416	GRB2-related adaptor protein
203124_s_at	1,15	0,15	SLC11A2	Hs.505545	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2
204533_at	1,15	0,15	CXCL10	Hs.413924	chemokine (C-X-C motif) ligand 10
214041_x_at	-1,15	0,18	RPL37A	Hs.433701	ribosomal protein L37a
205732_s_at	1,15	0,06	NCOA2	Hs.446678	nuclear receptor coactivator 2
38158_at	1,14	0,11	ESPL1	Hs.153479	extra spindle poles like 1 (S. cerevisiae)
213831_at	1,14	0,19	HLA-DQA1	Hs.387679, Hs.555872	major histocompatibility complex, class II, DQ alpha 1
214787_at	1,14	0	DENND4A	Hs.513817	DENN/MADD domain containing 4A
214453_s_at	1,13	0,06	IFI44	Hs.82316	interferon-induced protein 44
202558_s_at	1,13	0,04	STCH	Hs.352341	stress 70 protein chaperone, microsome-associated, 60kDa
40489_at	-1,13	0,07	ATN1	Hs.143766	atrophin 1
205000_at	-1,11	0,26	DDX3Y	Hs.99120	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked
204363_at	1,11	0,28	F3	Hs.62192	coagulation factor III (thromboplastin, tissue factor)
221785_at	-1,11	0,22	WIZ	Hs.442138	
216036_x_at	-1,1	0	WDTC1	Hs.469154	WD and tetratricopeptide repeats 1
203358_s_at	1,1	0,02	EZH2	Hs.444082	enhancer of zeste homolog 2 (Drosophila)
220832_at	1,09	0,39	TLR8	Hs.272410	toll-like receptor 8
210117_at	1,09	0	SPAG1	Hs.492373	sperm associated antigen 1
213976_at	-1,09	0,03	CIZ1	Hs.212395	CDKN1A interacting zinc finger protein 1
212720_at	1,09	0,11	PAPOLA	Hs.253726	poly(A) polymerase alpha
201564_s_at	1,08	0,08	FSCN1	Hs.118400	fascin homolog 1, actin-bundling protein (Strongylocentrotus purpuratus)
218600_at	-1,08	0,13	LIMD2	Hs.514402	LIM domain containing 2
211605_s_at	-1,08	0,06	RARA	Hs.535499	retinoic acid receptor, alpha
206471_s_at	1,07	0,18	PLXNC1	Hs.584845	plexin C1
212623_at	1,07	0,1	TMEM41B	Hs.501868	transmembrane protein 41B
213490_s_at	-1,07	0,01	MAP2K2	Hs.465627	mitogen-activated protein kinase kinase 2
213826_s_at	-1,07	0,62	H3F3A	Hs.533624	H3 histone, family 3A
208255_s_at	-1,07	0,06	FKBP8	Hs.173464	FK506 binding protein 8, 38kDa
219859_at	1,07	0,35	CLEC4E	Hs.236516	C-type lectin domain family 4, member E
209392_at	1,06	0,27	ENPP2	Hs.190977	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)
209803_s_at	1,06	0,32	PHLDA2	Hs.154036	pleckstrin homology-like domain, family A, member 2
208047_s_at	1,05	0,09	NAB1	Hs.107474	NGFI-A binding protein 1 (EGR1 binding protein 1)
205400_at	-1,05	0,14	WAS	Hs.2157	Wiskott-Aldrich syndrome (eczema-thrombocytopenia)
220266_s_at	1,05	0,13	KLF4	Hs.376206	Kruppel-like factor 4 (gut)
211816_x_at	1,04	0,35	FCAR	Hs.193122	Fc fragment of IgA, receptor for
212470_at	1,04	0,07	SPAG9	Hs.463439, Hs.589068	sperm associated antigen 9
201951_at	1,04	0,01	ALCAM	Hs.150693	activated leukocyte cell adhesion molecule
213299_at	-1,04	0,15	ZBTB7A	Hs.465623	zinc finger and BTB domain containing 7A
217502_at	1,03	0,09	IFIT2	Hs.437609	interferon-induced protein with tetratricopeptide repeats 2
214678_x_at	1,03	0,14	ZFX	Hs.370424	zinc finger protein, X-linked
207978_s_at	1,03	0,25	NR4A3	Hs.279522	nuclear receptor subfamily 4, group A, member 3
204371_s_at	-1,02	0,15	KHSRP	Hs.91142	KH-type splicing regulatory protein (FUSE binding protein 2)
216015_s_at	1,02	0,28	CIAS1	Hs.159483	cold autoinflammatory syndrome 1
219558_at	1,01	0,15	ATP13A3	Hs.529609	ATPase type 13A3
205787_x_at	1,01	0,02	LOC441155		
218548_x_at	-1,01	0,03	TEX264	Hs.512675, Hs.517864	testis expressed sequence 264
207691_x_at	1	0,34	ENTPD1	Hs.374230	ectonucleoside triphosphate diphosphohydrolase 1

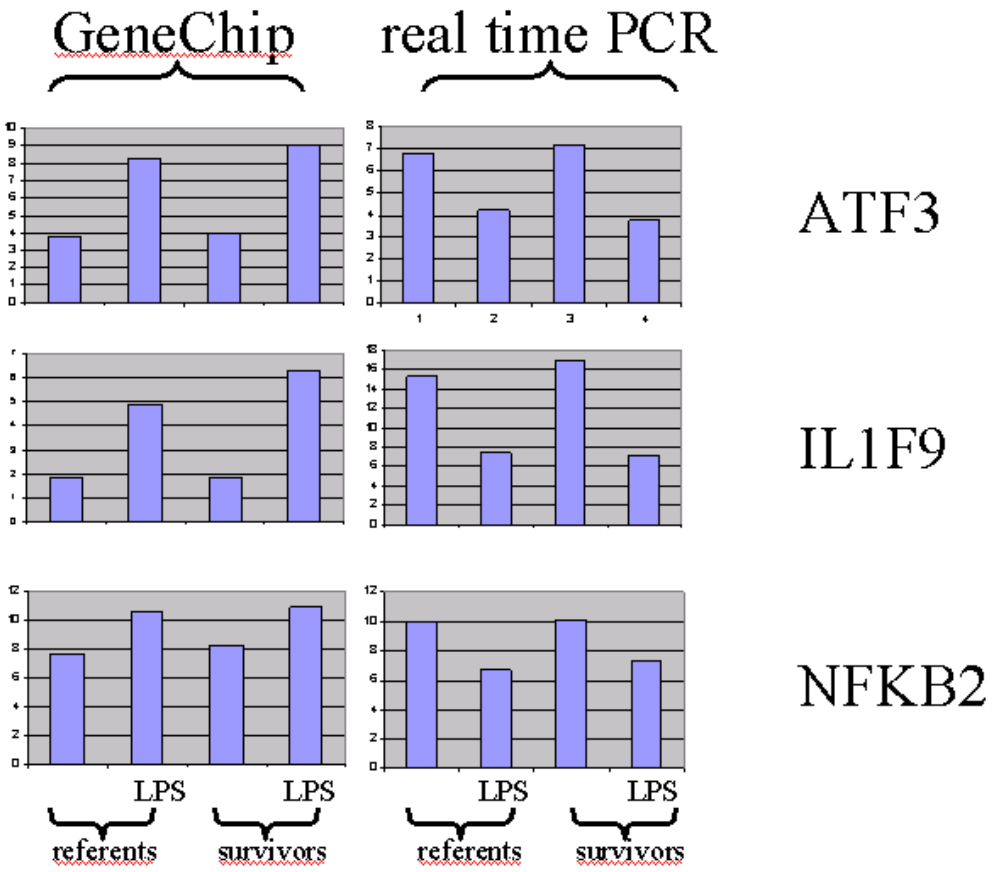
Supplementary file 2c. Probe sets with (uncorrected) t-test p-value < 0.001 (base level gene expression was compared between survivors and controls)

	logFC	p-value			
212712_at	-0,29	0,0000	CAMSAP1	Hs.522493	calmodulin regulated spectrin-associated protein 1
203003_at	0,23	0,0001	MEF2D	Hs.314327	MADS box transcription enhancer factor 2, polypeptide D (myocyte enhancer factor 2D)
218376_s_at	0,6	0,0003	MICAL1	Hs.33476	microtubule associated monoxygenase, calponin and LIM domain containing 1
33850_at	0,52	0,0003	MAP4	Hs.517949	microtubule-associated protein 4
203749_s_at	0,38	0,0005	RARA	Hs.535499	retinoic acid receptor, alpha
216091_s_at	-0,21	0,0005	BTRC	Hs.500812	beta-transducin repeat containing
202957_at	0,23	0,0008	HCLS1	Hs.14601	hematopoietic cell-specific Lyn substrate 1

Supplementary file 2d. Probe sets with (uncorrected) t-test p-value < 0.001 (comparison of LPS responsiveness between survivors and controls)

	logFC	p-value			
200664_s_at	-0,74	0,0000	DNAJB1	Hs.515210	DnaJ (Hsp40) homolog, subfamily B, member 1
207805_s_at	-0,44	0,0001	PSMD9	Hs.131151	proteasome (prosome, macropain) 26S subunit, non-ATPase, 9
211300_s_at	-0,52	0,0001	TP53	Hs.408312	tumor protein p53 (Li-Fraumeni syndrome)
201873_s_at	0,33	0,0001	ABCE1	Hs.12013	ATP-binding cassette, sub-family E (OABP), member 1
203110_at	-0,62	0,0002	PTK2B	Hs.491322	PTK2B protein tyrosine kinase 2 beta
214512_s_at	0,37	0,0002	SUB1	Hs.229641	SUB1 homolog (S. cerevisiae)
203320_at	0,3	0,0003	LNK	Hs.506784	
39705_at	0,66	0,0004	SIN3B	Hs.13999	SIN3 homolog B, transcription regulator (yeast)
221708_s_at	-0,27	0,0004	UNC45A	Hs.389461	unc-45 homolog A (C. elegans)
216036_x_at	-1,1	0,0005	WDTC1	Hs.469154	WD and tetratricopeptide repeats 1
212096_s_at	0,39	0,0005	MTUS1	Hs.7946	mitochondrial tumor suppressor 1
200803_s_at	0,34	0,0006	TEGT	Hs.35052	testis enhanced gene transcript (BAX inhibitor 1)
202064_s_at	0,67	0,0006	SEL1L	Hs.181300	sel-1 suppressor of lin-12-like (C. elegans)
207722_s_at	-0,68	0,0006	BTBD2	Hs.465543	BTB (POZ) domain containing 2
203194_s_at	0,87	0,0007	NUP98	Hs.524750	nucleoporin 98kDa
220048_at	0,18	0,0007	EDAR	Hs.171971	ectodysplasin A receptor
216091_s_at	0,24	0,0008	BTRC	Hs.500812	beta-transducin repeat containing
221839_s_at	0,6	0,0008	UBAP2	Hs.493739	ubiquitin associated protein 2
219226_at	0,79	0,0009	CRKRS	Hs.416108	Cdc2-related kinase, arginine/serine-rich
203480_s_at	0,56	0,0009			
208132_x_at	-0,33	0,0010	BAT2	Hs.436093	HLA-B associated transcript 2
219559_at	0,49	0,0010	C20orf59	Hs.512686	chromosome 20 open reading frame 59

Supplementary file 3. Validation of in silico gene expression measurement by real time PCR



Comparison of normalized U133A expression values (left panel) and normalized real time PCR data (delta CT) for three genes. Base level gene expression and gene expression upon LPS were recorded.
The GeneChip values are mean expression values (log2 transformed) from three pooled array experiments.
The real time PCR panel show mean deltaT values from 10 stroke survivors and from 9 healthy control subjects. High deltaT values indicate that a high number of PCRcycles is required to reach the standardized T-level – which implies that the initial number of template mRNA molecules was correspondingly low. Data from one of the control subjects were not evaluated due to unreliable amplification of the GAPDH standard.

U133A Data:

		control			control +LPS			survivor			survivor+LPS		
ATF3	202672_s_at	3,60	3,70	4,09	8,25	8,01	8,48	4,36	3,58	3,92	9,28	8,79	9,05
IL1F9	220322_at	1,92	1,87	1,89	5,62	2,64	6,33	1,89	1,88	1,86	6,91	5,31	6,72
NFKB2	207535_s_at	7,56	7,96	7,51	10,02	10,58	11,07	8,18	8,19	8,43	10,74	10,60	11,38

Real time PCR data

	ATF3			IL1F9			NFKB2		
	base level CT	LPS CT	CT	base level CT	LPS CT	CT	base level CT	LPS CT	CT
stroke survivors									
A-750	8,2	5,4	2,8	17,6	8,9	8,7	9,9	6,1	3,8
A-751	6,8	5,9	0,9	16,4	9,1	7,3	10,2	6,6	3,6
A-763	6,6	3,1	3,5	15,8	5,5	10,3	8	4	4
A-773	8	4,8	3,2	18,5	7,5	11	8	5,4	2,6
A-777	7,9	4,4	3,5	20,3	6,8	13,5	11,7	7,9	3,8
691	6,4	3,1	3,3	17,8	6,5	11,3	10,3	7,1	3,2
778	7,7	3	3,7	17,3	7,1	10,2	12,6	7,4	5,2
781	7,1	2,9	4,2	17,1	5,7	11,4	10,9	6,3	4,6
787	7	2,8	4,2	15,1	5,1	10	11,3	6,5	4,8
788	6,5	2,8	3,7	13,6	10,2	3,4	9	15,5	6,5
healthy control subjects									
A-688	5,4	4,2	1,2	16	6,5	9,5	8,5	5,7	2,8
A-690	6,9	4,2	2,7	15,8	9,9	5,9	11,2	7,8	3,6
A-697	6,7	4,3	2,4	14,8	7,2	7,6	8	4,8	3,2
A-758	6,6	4	2,6	17,6	7,9	9,7	10,8	8,2	2,6
683	6,1	4,4	1,7	14,4	7,4	7	9,6	6,7	2,9
766	7,4	5,8	1,6	14,9	8,4	6,5	9,4	7,6	1,8
767	7,4	3,9	3,5	12,6	6,7	5,9	10	6,9	3,1
768	6,9	3,2	3,7	14,2	6,2	8	9,4	6,2	3,2
770	7,7	3,8	3,9	17,7	6	11,7	12,3	6,6	5,7

RNA from stroke survivors A-750, A751, A763, A773 and A777 as well as from healthy referents A688, A690, A697 and A758 was quantified by both methods (real time PCR and GeneChip technology). The other stroke survivors and healthy control subjects were newly recruited subjects: RNA from their cells was quantified only by real time PCR.

CT is the mean difference between the Ct value of the standard reaction (GAPDH) and the analyzed gene. Each reaction was run in threefold. CT is the difference of between CTs measured in LPS-treated cells and non-treated cells.