

## **Supplementary material**

### **Animal infection**

Holstein cows in the fourth month of their first lactation have experimentally been infected with mastitis pathogens. Details of the experimental udder infections, the clinical aspects and sample collection have previously been described (1). Briefly, one udder quarter of each animal was kept as an uninfected control the other ones were 6, 12, or 24 h infected with 500 CFU *E. coli* strain 1303. Udder tissue samples were collected aseptically within 5 to 10 min after killing the cow and snap frozen in liquid nitrogen. Mammary tissue (50 to 200 mg) was powdered under liquid nitrogen and mixed with a chaotropic lysis buffer (RLT, RNeasy Kit, Qiagen, Hilden, Germany). RNA was extracted with Phenol (Ambion, Darmstadt, Germany), purified (RNeasy spin columns, Qiagen) and contaminating DNA was removed (DNase I digestion, Qiagen).

### **Profiling the pathogen-specific kinetics of mounting the mammary immune defence is difficult in cows, but feasible in pbMEC**

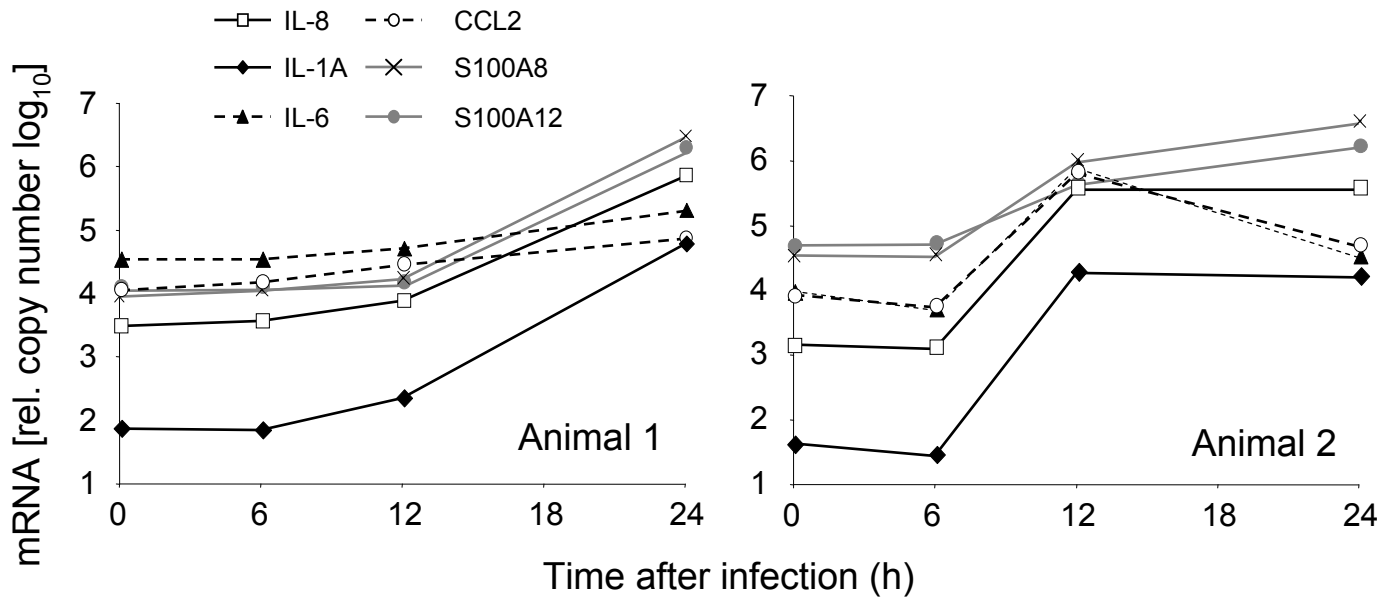
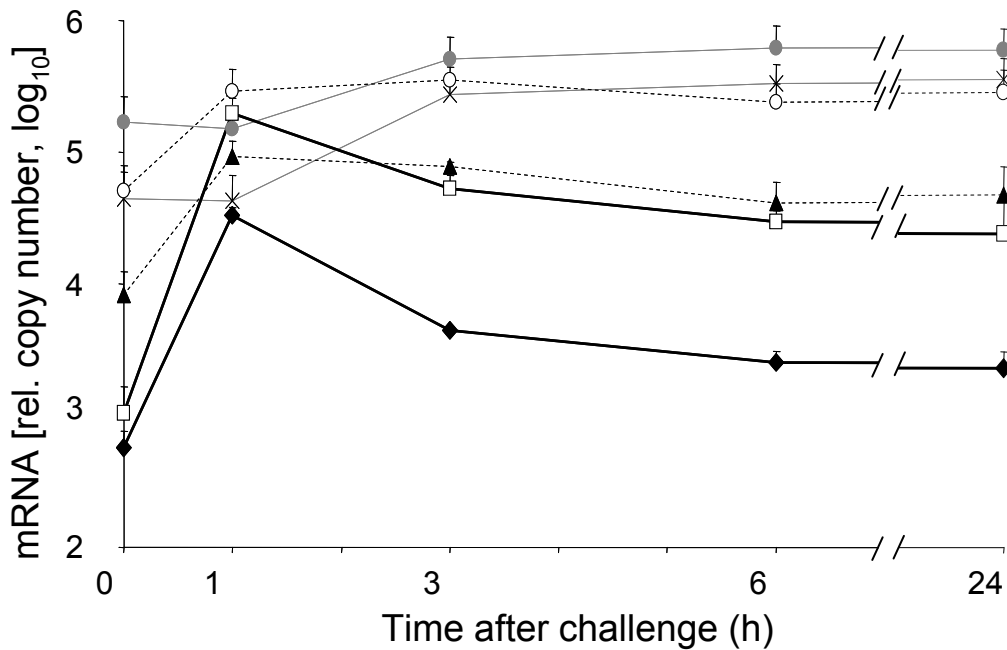
In the course of validating the udder samples we found that the *E. coli* infection resulted in pronounced alterations in the mRNA abundance of candidate genes for immune response. However, the time course varied considerably between the animals hampering a statistically clear cut analysis. We noticed, though that some of the candidate genes encoding immune relevant factors were co-regulated over time in an animal-specific fashion (Supplementary figure S1A; *IL1A-IL-8*; *IL-6-CCL2*; *S100A8-S100A12*). This co-regulation proved to be statistically significant, comparing sixteen udder quarters harbouring the *E. coli* pathogens for 0 h, 6 h, 12 h and 24 h (Supplementary table 2A). We used this co-regulation as a diagnostic criterion to evaluate if cultures of primary bovine mammary epithelial cells (pbMEC) would reflect such complex regulation patterns. We thus challenged three pbMEC

preparations established from udders of three different cows for one, three, six, and 24 h with  $10^7$  per ml of heat inactivated *E. coli* strain 1303 particles and determined the kinetics of modulating the mRNA abundance of those candidate genes. We found the very same pairs of genes to be co-regulated in these cultures over the entire time period of the challenge (Supplemental figure S1B) again in a statistically significant fashion (Supplemental table 2B).

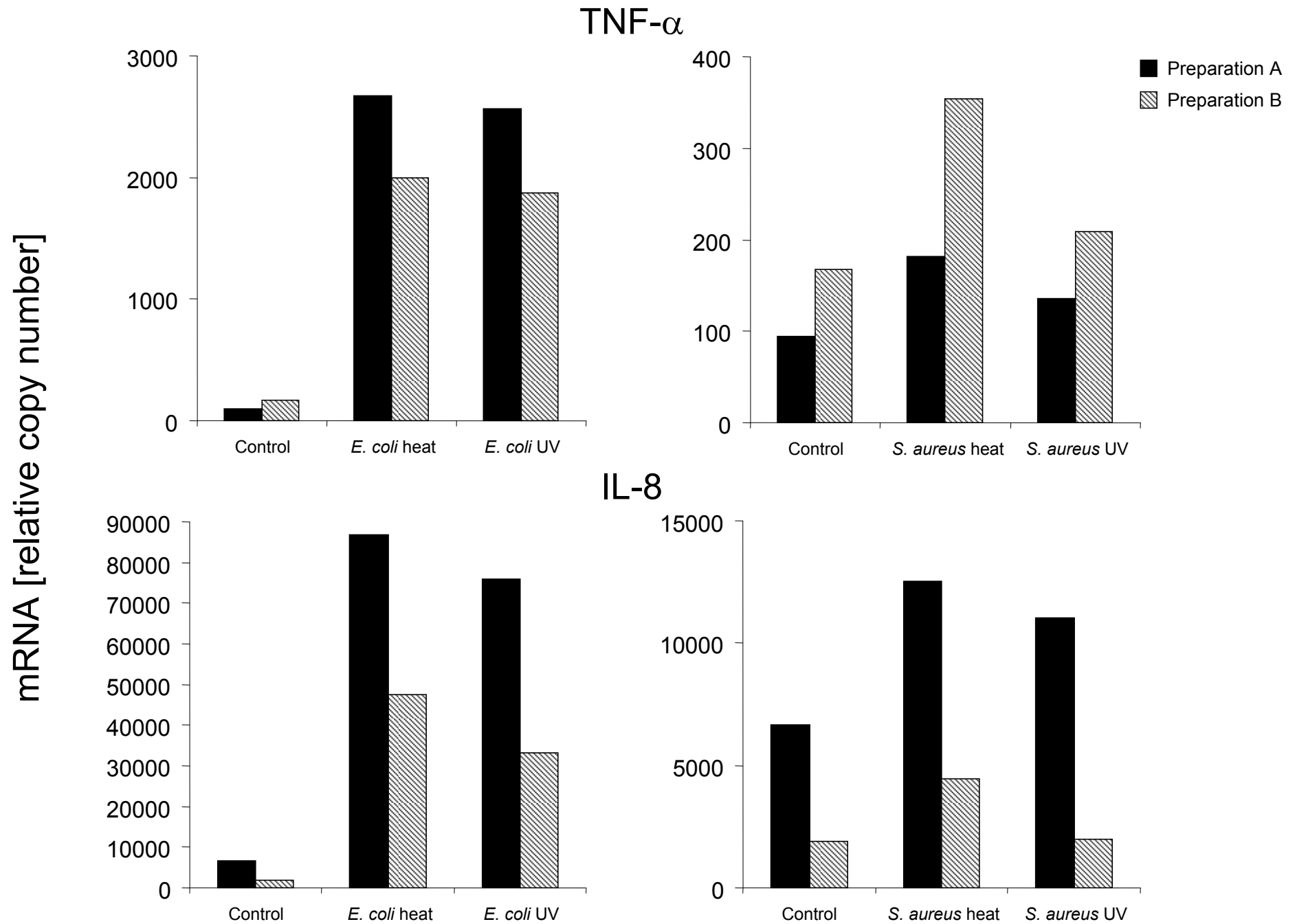
### **UV-inactivation of pathogens**

*E. coli* and *S. aureus* pathogens were grown to the logarithmic phase as described in Material and Methods. Cells were spun down, washed twice with PBS and resuspended herein at a density of  $1 \times 10^8$ /ml. For UV irradiation, 12 ml of a culture was placed in a sterile 9 cm Petri dish with the lid removed. The dish was cooled on ice and exposed to the UV light using a UV-Crosslinker (BLX-254, Biometra, Goettingen, Germany) for 5 min at  $99.99 \text{ J/cm}^2$ . Afterwards the cell suspensions were again spun down and resuspended in RPMI 1640 at a density of  $5 \times 10^8$ /ml. The killing of all cells was verified by control plating.

1. **Petzl, W., H. Zerbe, J. Gunther, W. Yang, H. M. Seyfert, G. Nurnberg, and H. J. Schuberth.** 2008. *Escherichia coli*, but not *Staphylococcus aureus* triggers an early increased expression of factors contributing to the innate immune defense in the udder of the cow. *Vet. Res.* **39**:18.

**A****B**

**Figure S1.** Time course of alterations in the mRNA abundance of immune relevant genes. (A) Udder quarters from two different animals were infected with live *E. coli*<sub>1303</sub> (500 CFU for the time as indicated (abscissa) and relative mRNA copy numbers (ordinate) of *IL-1A*, *IL-8*, *IL-6*, *CCL2*, *S100A8*, *S100A12* measured with qRT-PCR in uninfected control and infected quarters. (B) Relative mRNA copy numbers of the same genes measured in pbMEC cultures challenged with heat inactivated *E. coli* particles (10<sup>7</sup>/ml) for the indicated time. Values represent means (± S.E.M.) from three independent biological replicas.



**Figure S2.** Induction of cytokine expression in pbMEC after challenge with heat- or UV-inactivated pathogens. Two pbMEC preparations (A, B) from two different animals were left unchallenged (control) or were challenged for 3 h with  $10^7$  heat- or UV-inactivated *E. coli* or *S. aureus* particles. Relative mRNA copy numbers of TNF- $\alpha$  and IL-8 were measured by qRT-PCR.

Table S1. Sequences of oligonucleotide primers used for real-time PCR quantification.

Gene	GenBank no.	Primer sequence (5'-3')	Amplificate size (bp)
LAP	NM_203435	AGGCTCCATCACCTGCTCCTT * CCTGCAGCATTCTTACTTGGGCT *	182
CCL2	NM_174006.2	CGCTGCAACATGAAGGTCTC TGGGGTCTGCACATAACTCCT	244
IL6	NM_000600.3	GGAGGAAAAGGACGGATGCT GGTCAGTGTGGTGGCTGGA	227
IL8	NM_173925	CCTCTTGTTCAATATGACTTCCA GGCCCACTCTCAATAACTCTC	170
IL1A	NM_174092	GGCCAAAGTCCCTGACCTCT CTGCCACCATCACCACATTC	224
CCL5	NM_175827	TCCCCATATGCCTCGGAC TCGCACCCACTTCTTCTCTG	229
TNF	NM_173966.2	CTTCTGCCTGCTGCACTTCG GAGTTGATGTCGGCTACAACG	156
LTF	NM_180998.2	CTGTGGCTAAATTCTTCTCTGC TTAACAAAAGCCACGTCTCCAG	187
NFKB1	NM_001076409.1	TCAAACCTCCAGAATGGCAGA GAAATCCTCTCTGTTTAGGTTGCTC	179
S100A8	NM_001113725.1	TCTATTTTGGGGAGACCTGGTG CCAAGTGTCCGCATCCTTTT	203
S100A12	NM_174651.2	AGGGAATCATCAACATCTTCCAC TCTTTATCGGCATCCAGGTCTT	172
NOS2A	NM_001076799	ACAGGATGACCCCAAACGTC TCTGGTGAAGCGTGTCTTGG	188
IFN $\beta$	NM_174350 NM_001015617	TTCTCCACCACAGCTCTTTCC TGGCATCTTCCTTCYGGAACT	187

\*upper line: forward-, lower line, reverse-primer

Table S2A: Correlation of the mRNA concentrations, sampled from control quarters or those infected with *E. coli*<sub>1303</sub> for 6, 12 and 24 h of four cows.

Gene	IL1A	CCL2	IL6	S100A8	S100A12
IL8	<b>0.94**</b>	0.48	0.47	0.76**	0.89**
IL1A		0.33	0.41	0.55*	0.76**
CCL2			<b>0.93**</b>	0.27	0.25
IL6				0.08	0.14
S100A8					<b>0.96**</b>

Pearson Product Moment Correlation; bold letter  $r > 0.90$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$

Table S2B: Correlation of the mRNA concentrations in pbMEC cultures (n, 3) challenged with heat inactivated *E. coli*<sub>1303</sub> particles for 0, 1, 3, 6, and 24 h.

	IL1A	CCL2	IL6	S100A8	S100A12
IL8	<b>0.95**</b>	0.13	0.46	-0.26	-0.17
IL1A		0.15	0.50	-0.37	-0.31
CCL2			<b>0.90**</b>	-0.21	-0.20
IL6				-0.33	-0.30
S100A8					<b>0.96**</b>

Pearson Product Moment Correlation; bold letter  $r > 0.90$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$

Table S3. Correlation of relative mRNA concentrations determined in microarray hybridizations or qRT-PCR from three biological replica of pbMEC stimulated for 0, 1, 3, 6, 24 h with  $10^7$  particles / ml of heat inactivated *E. coli*<sub>1303</sub>.

<b>Gene</b>	<b>SRCC*</b>
CCL2	0.96
CCL5	0.98
DEFB4/LAP	0.99
IL1A	0.99
IL6	0.93
IL8	0.95
LTF	0.96
NFKB1/p50	0.86
NOS2A	1.00
TNF	0.93
<b>mean</b>	<b>0.95</b>

\* Spearman's rank correlation coefficient

**Table S4A: Human ortholog genes eligible for IPA, with maximal regulation at indicated time points**

**A) Genes regulated in *E. coli* stimulated pbMEC**

Symbol	Entrez Gene Name	fold change				Bovine Affy.-ID	Type (IPA)
		1 h	3 h	6 h	24 h		
<b>Maximum regulated 1 h after stimulation</b>							
<b>CXCL1</b>	chemokine (C-X-C motif) ligand 1	<b>779</b>	<b>142</b>	<b>78</b>	<b>43</b>	Bt.611.1.S1_at	cytokine
<b>CCL20</b>	chemokine (C-C motif) ligand 20	<b>529</b>	<b>479</b>	<b>137</b>	<b>69</b>	Bt.9560.1.S1_at	cytokine
<b>IL8</b>	interleukin 8	<b>384</b>	<b>144</b>	<b>103</b>	<b>71</b>	Bt.155.1.S1_at	cytokine
<b>CXCL2</b>	chemokine (C-X-C motif) ligand 2	<b>348</b>	<b>223</b>	<b>144</b>	<b>98</b>	Bt.610.1.A1_at	cytokine
<b>IL1A</b>	interleukin 1, alpha	<b>123</b>	<b>24</b>	<b>5</b>	<b>4</b>	Bt.191.1.S1_at	cytokine
RND1	Rho family GTPase 1	<b>92</b>	<b>84</b>	<b>33</b>	<b>22</b>	Bt.3774.1.A1_at	enzyme
MAP3K8	mitogen-activated protein kinase kinase kinase 8	<b>84</b>	<b>19</b>	<b>15</b>	<b>8</b>	Bt.28561.1.S1_at	kinase
CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1	<b>63</b>	<b>41</b>	<b>5</b>	-	Bt.16058.1.A1_at	enzyme
<b>TNFAIP3</b>	tumor necrosis factor, alpha-induced protein 3	<b>40</b>	<b>8</b>	<b>6</b>	<b>5</b>	Bt.17514.1.S1_at	other
<b>NFKBIA</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	<b>39</b>	<b>15</b>	<b>11</b>	<b>8</b>	Bt.9027.1.S1_at	other
<b>NFKBIZ</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta	<b>27</b>	<b>8</b>	<b>8</b>	<b>5</b>	Bt.8227.1.S1_at	transcription regulator
IRF1	interferon regulatory factor 1	<b>18</b>	<b>9</b>	<b>3</b>	<b>2</b>	Bt.10077.1.S2_at	transcription regulator
<b>CXCL3</b>	chemokine (C-X-C motif) ligand 3	<b>17</b>	<b>7</b>	<b>8</b>	<b>6</b>	Bt.23093.1.S1_at	cytokine
<b>CD83</b>	CD83 molecule	<b>11</b>	-	-	-	Bt.3841.1.S1_at	other
NR4A2	nuclear receptor subfamily 4, group A, member 2	<b>9</b>	<b>2</b>	<b>2</b>	<b>2</b>	Bt.10060.1.S1_at	ligand-dependent nuclear receptor
NFKBID	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, delta	<b>8</b>	-	-	-	Bt.10867.1.S1_at	other
TIPARP	TCDD-inducible poly(ADP-ribose) polymerase	<b>7</b>	<b>3</b>	-	-	Bt.23611.3.S1_at	other
<b>IER3</b>	immediate early response 3	<b>7</b>	<b>2</b>	<b>2</b>	<b>2</b>	Bt.2153.1.S1_at	other
G0S2	G0/G1switch 2	<b>7</b>	<b>5</b>	-	-	Bt.4137.1.A1_at	other
<b>TNF</b>	tumor necrosis factor (TNF superfamily, member 2)	<b>7</b>	-	-	-	Bt.12756.1.S1_at	cytokine
BMP2	bone morphogenetic protein 2	<b>7</b>	<b>6</b>	<b>3</b>	<b>2</b>	Bt.29956.1.A1_at	growth factor
<b>PLAU</b>	plasminogen activator, urokinase	<b>6</b>	<b>4</b>	<b>2</b>	<b>2</b>	Bt.2519.1.S1_at	peptidase
<b>ZFP36</b>	zinc finger protein 36, C3H type, homolog (mouse)	<b>5</b>	-	-	-	Bt.3863.1.S1_at	transcription regulator
DLX2	distal-less homeobox 2	<b>5</b>	-	-	-	Bt.13363.1.A1_at	transcription regulator
PPP1R15A	protein phosphatase 1, regulatory (inhibitor) subunit 15A	<b>5</b>	-	-	-	Bt.1187.1.S1_at	other
<b>ICAM1</b>	intercellular adhesion molecule 1	<b>5</b>	<b>2</b>	-	-	Bt.18355.1.A1_at	transmembrane receptor
SIK1	salt-inducible kinase 1	<b>5</b>	<b>3</b>	<b>2</b>	<b>3</b>	Bt.21518.1.S1_at	kinase
FOSL1	FOS-like antigen 1	<b>5</b>	<b>4</b>	-	-	Bt.17885.1.A1_at	transcription regulator
KCNK5	potassium channel, subfamily K, member 5	<b>4</b>	<b>2</b>	-	-	Bt.15691.1.S1_at	ion channel
PIM1	pim-1 oncogene	<b>3</b>	-	-	-	Bt.272.1.S1_at	kinase
<b>PDE4B</b>	phosphodiesterase 4B, cAMP-specific (phosphodiesterase E4 dunce homolog, Drosophila)	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	Bt.20286.1.S1_at	enzyme
RCAN1	regulator of calcineurin 1	<b>3</b>	<b>3</b>	-	-	Bt.6377.1.S1_at	transcription regulator
<b>ETS2</b>	v-ets erythroblastosis virus E26 oncogene homolog 2 (avian)	<b>3</b>	-	-	-	Bt.5774.1.S1_at	transcription regulator
AXUD1	AXIN1 up-regulated 1	<b>3</b>	-	-	-	Bt.20215.1.S1_at	other
BTG2	BTG family, member 2	<b>3</b>	-	-	-	Bt.5326.2.S1_at	transcription regulator
<b>RGS2</b>	regulator of G-protein signaling 2, 24kDa	<b>3</b>	<b>2</b>	-	-	Bt.10855.1.S1_at	other
ITPKC	inositol 1,4,5-trisphosphate 3-kinase C	<b>3</b>	<b>2</b>	-	-	Bt.21658.1.S1_at	kinase
NR4A1	nuclear receptor subfamily 4, group A, member 1	<b>3</b>	-	-	-	Bt.23373.1.S1_at	ligand-dependent nuclear receptor
SPRY2	sprouty homolog 2 (Drosophila)	<b>2</b>	-	-	-	Bt.28178.1.A1_at	other
ENC1	ectodermal-neural cortex (with BTB-like domain)	<b>2</b>	-	-	-	Bt.26781.1.A1_at	peptidase
<b>JUNB</b>	jun B proto-oncogene	<b>2</b>	-	-	-	Bt.20542.1.S1_at	transcription regulator
<b>NFIL3</b>	nuclear factor, interleukin 3 regulated	<b>2</b>	<b>2</b>	-	-	Bt.27854.2.S1_at	transcription regulator
ZNF207	zinc finger protein 207	<b>-2</b>	-	-	-	Bt.21777.1.S1_at	transcription regulator
HNRPLL	heterogeneous nuclear ribonucleoprotein L-like	<b>-2</b>	-	-	-	Bt.18908.1.S1_at	other



VTI1A	vesicle transport through interaction with t-SNAREs homolog 1A (yeast)	-2	-	-	-	Bt.27023.1.S1_at	transporter
SQRDL	sulfide quinone reductase-like (yeast)	-2	-	-	-	Bt.10130.1.S1_at	enzyme
NFIB	nuclear factor I/B	-2	-	-	-	Bt.25067.1.A1_at	transcription regulator
RBM14	RNA binding motif protein 14	-2	-	-	-	Bt.13507.1.S1_at	transcription regulator
NCOA4	nuclear receptor coactivator 4	-2	-	-	-	Bt.24296.1.A1_at	transcription regulator
ATP6V0E1	ATPase, H+ transporting, lysosomal 9kDa, V0 subunit e1	-2	-	-	-	Bt.7672.1.A1_at	transporter
<b>ERBB2</b>	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)	-2	-	-	-	Bt.19318.1.A1_at	kinase
PLS1	plastin 1 (I isoform)	-2	-	-	-	Bt.20756.1.A1_at	other
RIT1	Ras-like without CAAX 1	-2	-	-	-	Bt.24892.1.A1_at	enzyme
CCDC7	coiled-coil domain containing 7	-2	-	-	-	Bt.680.2.A1_at	other
GBAS	glioblastoma amplified sequence	-3	-	-	-	Bt.11538.1.A1_at	other
ZNF235	zinc finger protein 235	-3	-	-	-	Bt.18686.1.A1_at	other
GCLM	glutamate-cysteine ligase, modifier subunit	-3	-	-	-	Bt.19533.2.A1_at	enzyme
VCL	vinculin	-3	-2	-	-	Bt.20821.1.A1_at	enzyme
FBXO4	F-box protein 4	-4	-	-	-	Bt.1589.1.S1_at	enzyme
ARL4A	ADP-ribosylation factor-like 4A	-5	-3	-	-	Bt.7170.1.S1_at	enzyme
KRT15	keratin 15	-7	-4	-	-	Bt.22801.1.S1_at	other

#### Maximum regulated 3 h after stimulation

CYP1A1	cytochrome P450, family 1, subfamily A, polypeptide 1	437	1257	429	3	Bt.13772.1.A1_at	enzyme
<b>NOS2</b>	nitric oxide synthase 2, inducible	10	377	54	15	Bt.8479.1.A1_at	enzyme
RSAD2	radical S-adenosyl methionine domain containing 2	-	108	57	9	Bt.24467.1.S1_at	enzyme
BCL2A1	BCL2-related protein A1	3	59	15	3	Bt.7542.1.S1_at	other
SLC27A1	solute carrier family 27 (fatty acid transporter), member 1	-	44	37	7	Bt.15788.3.S1_at	transporter
IFIT2	interferon-induced protein with tetratricopeptide repeats 2	-	41	18	5	Bt.24795.1.A1_at	other
<b>IL6</b>	interleukin 6 (interferon, beta 2)	32	39	13	11	Bt.3686.1.S1_at	cytokine
ADAMTS4	ADAM metalloproteinase with thrombospondin type 1 motif, 4	5	34	8	6	Bt.15675.1.S1_at	peptidase
TNFAIP2	tumor necrosis factor, alpha-induced protein 2	6	33	8	4	Bt.9570.1.S1_at	other
BIRC3	baculoviral IAP repeat-containing 3	16	28	6	4	Bt.9391.2.S1_at	enzyme
<b>TLR2</b>	toll-like receptor 2	3	22	12	5	Bt.8945.1.S1_at	transmembrane receptor
<b>PTGS2</b>	prostaglandin-endoperoxide synthase 2	12	18	10	11	Bt.15758.1.S1_at	enzyme
BIRC2	baculoviral IAP repeat-containing 2	11	17	7	4	Bt.9391.1.A1_at	other
<b>SOD2</b>	superoxide dismutase 2, mitochondrial	2	16	16	13	Bt.2501.2.A1_at	enzyme
NAV3	neuron navigator 3	-	15	2	-	Bt.25031.1.S1_at	other
MXI1	MAX interactor 1	5	15	12	5	Bt.20431.2.S1_at	transcription regulator
NFATC1	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	-	13	2	-	Bt.26630.1.S1_at	transcription regulator
<b>CLL2</b>	chemokine (C-C motif) ligand 2	6	13	7	8	Bt.2408.1.S1_at	cytokine
<b>OLR1</b>	oxidized low density lipoprotein (lectin-like) receptor 1	2	12	7	6	Bt.367.1.S1_at	transmembrane receptor
<b>CX3CL1</b>	chemokine (C-X3-C motif) ligand 1	2	12	7	4	Bt.1275.1.S1_at	cytokine
GOLGA4	golgi autoantigen, golgin subfamily a, 4	4	11	10	3	Bt.19349.1.A1_at	other
<b>IL1B</b>	interleukin 1, beta	3	11	6	-	Bt.4856.1.S2_at	cytokine
<b>CSF3</b>	colony stimulating factor 3 (granulocyte)	3	11	3	3	Bt.4660.1.S1_at	cytokine
BACH2	BTB and CNC homology 1, basic leucine zipper transcription factor 2	-	10	-	-	Bt.20308.1.S1_at	transcription regulator
SLCO4A1	solute carrier organic anion transporter family, member 4A1	5	10	-	2	Bt.27240.1.A1_at	transporter
ANGPTL4	angiopoietin-like 4	5	9	5	2	Bt.4816.1.S1_at	other
TIFA	TRAF-interacting protein with forkhead-associated domain	-	9	4	-	Bt.29044.1.S1_at	other
TRIM16	tripartite motif-containing 16	-	9	-	-	Bt.28116.1.S1_at	transcription regulator
<b>CTSC</b>	cathepsin C	4	8	3	3	Bt.10865.1.S1_at	peptidase
SERPINB2	serpin peptidase inhibitor, clade B (ovalbumin), member 2	-	8	2	-	Bt.13073.1.S1_at	other
<b>SOCS1</b>	suppressor of cytokine signaling 1	-	8	-	-	Bt.1736.1.A1_at	other

PPP1R3C	protein phosphatase 1, regulatory (inhibitor) subunit 3C	5	7	7	7	Bt.13484.1.A1_at	phosphatase
P2RX6	purinergic receptor P2X, ligand-gated ion channel, 6	-	7	3	2	Bt.16124.2.S1_at	ion channel
NFKBIE	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon	3	7	3	3	Bt.1536.1.A1_at	transcription regulator
SERPINB1	serpin peptidase inhibitor, clade B (ovalbumin), member 1	3	7	6	2	Bt.27909.1.S1_at	other
TOP1	topoisomerase (DNA) I	-	7	-	-	Bt.17070.1.S1_at	enzyme
<b>PTGER2</b>	prostaglandin E receptor 2 (subtype EP2), 53kDa	-	6	5	4	Bt.12301.1.S1_at	G-protein coupled receptor
PRSS22	protease, serine, 22	-	6	-	2	Bt.29351.1.A1_at	peptidase
DNAJB1	DnaJ (Hsp40) homolog, subfamily B, member 1	5	6	2	2	Bt.28288.1.S1_at	other
FBXO33	F-box protein 33	-	6	3	-	Bt.13844.2.S1_at	other
CYP26B1	cytochrome P450, family 26, subfamily B, polypeptide 1	3	6	-	-	Bt.20507.1.S1_at	enzyme
MMP1	matrix metalloproteinase 1 (interstitial collagenase)	2	6	3	2	Bt.72.1.S1_at	peptidase
RNF19B	ring finger protein 19B	2	6	2	-	Bt.15692.1.A1_at	other
<b>RELB</b>	v-rel reticuloendotheliosis viral oncogene homolog B	2	6	3	3	Bt.17669.1.S1_a_at	transcription regulator
<b>NFKB1</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	-	6	3	2	Bt.9309.1.A1_at	transcription regulator
<b>TNFAIP6</b>	tumor necrosis factor, alpha-induced protein 6	-	5	2	-	Bt.958.1.A1_at	other
JARID2	jumonji, AT rich interactive domain 2	-	5	-	-	Bt.7008.1.S1_at	transcription regulator
ABTB2	ankyrin repeat and BTB (POZ) domain containing 2	-	5	-	-	Bt.26223.1.S1_at	other
<b>IRF9</b>	interferon regulatory factor 9	-	5	4	2	Bt.20054.1.S1_at	transcription regulator
MYB	v-myb myeloblastosis viral oncogene homolog (avian)	-	5	-	-	Bt.12781.1.S1_at	transcription regulator
<b>FAS</b>	Fas (TNF receptor superfamily, member 6)	-	5	-	-	Bt.4345.1.S1_at	transmembrane receptor
<b>BCL3</b>	B-cell CLL/lymphoma 3	2	5	-	-	Bt.16930.1.A1_at	transcription regulator
MAFF	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)	5	5	2	2	Bt.7142.1.S1_at	transcription regulator
<b>CFLAR</b>	CASP8 and FADD-like apoptosis regulator	-	5	3	-	Bt.18643.2.S1_at	other
N4BP1	NEDD4 binding protein 1	-	5	3	-	Bt.20548.1.S1_at	other
CDC42EP2	CDC42 effector protein (Rho GTPase binding) 2	-	5	-	2	Bt.20259.1.S1_at	other
GARNL4	GTPase activating Rap/RanGAP domain-like 4	-	5	-	-	Bt.22849.1.S1_at	other
LPO	lactoperoxidase	-	5	4	-	Bt.4784.1.S1_at	enzyme
IPMK	inositol polyphosphate multikinase	-	5	2	-	Bt.25055.1.A1_at	kinase
BPIL2	bactericidal/permeability-increasing protein-like 2	-	4	2	2	Bt.16124.1.A1_at	transporter
GBP5	guanylate binding protein 5	-	4	2	-	Bt.16350.1.S1_at	enzyme
SLC25A28	solute carrier family 25, member 28	-	4	3	-	Bt.20517.1.S1_at	other
PARP8	poly (ADP-ribose) polymerase family, member 8	-	4	-	-	Bt.27957.1.A1_at	other
IFNAR2	interferon (alpha, beta and omega) receptor 2	-	4	3	2	Bt.5508.1.S1_at	transmembrane receptor
KLF4	Kruppel-like factor 4 (gut)	4	4	-	-	Bt.1424.1.S1_at	transcription regulator
<b>CEBPD</b>	CCAAT/enhancer binding protein (C/EBP), delta	3	4	2	2	Bt.6406.1.S3_at	transcription regulator
<b>PLAT</b>	plasminogen activator, tissue	-	4	3	-	Bt.12302.1.S1_at	peptidase
IFIT5	interferon-induced protein with tetratricopeptide repeats 5	-	4	4	-	Bt.22130.1.S1_at	other
<b>ITGA2</b>	integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	-	4	-	-	Bt.12761.1.A1_at	other
TRIB2	tribbles homolog 2 (Drosophila)	3	4	-	-	Bt.22857.1.S2_at	kinase
<b>CIITA</b>	class II, major histocompatibility complex, transactivator	-	4	-	-	Bt.24665.1.S1_at	transcription regulator
RNF144B	ring finger protein 144B	-	4	-	-	Bt.6796.1.A1_at	enzyme
PPAP2B	phosphatidic acid phosphatase type 2B	-	4	3	3	Bt.23509.1.S1_at	phosphatase
L2HGDH	L-2-hydroxyglutarate dehydrogenase	-	4	-	-	Bt.26150.1.A1_at	enzyme
MARCKSL1	MARCKS-like 1	-	4	3	-	Bt.3880.1.S1_at	other
<b>CASP3</b>	caspase 3, apoptosis-related cysteine peptidase	-	3	3	-	Bt.29166.1.S1_at	peptidase
<b>F2R</b>	coagulation factor II (thrombin) receptor	-	3	-	-	Bt.10814.1.S1_at	G-protein coupled receptor
RASSF1	Ras association (RalGDS/AF-6) domain family member 1	-	3	-	-	Bt.20366.1.S1_at	other
FRK	fyn-related kinase	-	3	2	2	Bt.27815.1.S1_at	kinase
DOT1L	DOT1-like, histone H3 methyltransferase (S. cerevisiae)	-	3	-	-	Bt.26580.1.A1_at	phosphatase
HIVEP2	human immunodeficiency virus type I enhancer binding protein 2	-	3	-	-	Bt.8012.1.S1_at	transcription regulator
RGS16	regulator of G-protein signaling 16	-	3	-	-	Bt.26612.2.S1_at	other

<b>PIK3R5</b>	phosphoinositide-3-kinase, regulatory subunit 5	-	3	3	2	Bt.24675.1.S1_at	kinase
GRK5	G protein-coupled receptor kinase 5	-	3	-	-	Bt.4263.1.S1_at	kinase
<b>TLR4</b>	toll-like receptor 4	-	3	-	-	Bt.9030.1.S1_at	transmembrane receptor
<b>ABCB4</b>	ATP-binding cassette, sub-family B (MDR/TAP), member 4	-	3	2	-	Bt.15958.2.A1_a_at	transporter
<b>ETS1</b>	v-ets erythroblastosis virus E26 oncogene homolog 1 (avian)	-	3	-	-	Bt.12712.3.S1_at	transcription regulator
<b>IL1RAP</b>	interleukin 1 receptor accessory protein	-	3	2	-	Bt.28708.1.S1_at	transmembrane receptor
NRP2	neuropilin 2	-	3	-	-	Bt.8308.1.A1_at	kinase
MOCS2	molybdenum cofactor synthesis 2	-	3	-	-	Bt.24978.1.A1_at	enzyme
TFPI2	tissue factor pathway inhibitor 2	-	3	3	-	Bt.2017.1.S1_at	other
RNF41	ring finger protein 41	-	3	-	-	Bt.4930.1.S1_at	other
GFPT2	glutamine-fructose-6-phosphate transaminase 2	-	3	-	-	Bt.8781.1.S1_at	enzyme
<b>PTPN1</b>	protein tyrosine phosphatase, non-receptor type 1	-	3	-	-	Bt.9542.1.S1_at	phosphatase
MBOAT1	membrane bound O-acyltransferase domain containing 1	-	3	2	-	Bt.20276.2.A1_at	other
FLVCR2	feline leukemia virus subgroup C cellular receptor family, member 2	-	3	-	-	Bt.24526.1.S1_at	transporter
<b>PLAUR</b>	plasminogen activator, urokinase receptor	-	3	-	-	Bt.1942.1.S1_at	transmembrane receptor
<b>TRAF3</b>	TNF receptor-associated factor 3	-	3	3	2	Bt.19809.1.S1_at	other
<b>IL6ST</b>	interleukin 6 signal transducer (gp130, oncostatin M receptor)	-	3	-	-	Bt.13719.1.S1_at	transmembrane receptor
NR4A3	nuclear receptor subfamily 4, group A, member 3	-	3	2	-	Bt.17173.1.A1_at	ligand-dependent nuclear receptor
AMPD2	adenosine monophosphate deaminase 2 (isoform L)	-	3	-	-	Bt.15751.1.S1_at	enzyme
DENND5A	DENN/MADD domain containing 5A	-	3	-	-	Bt.5406.1.S1_at	other
SEMA4B	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4E	-	3	-	-	Bt.26671.1.S1_at	other
<b>ICOSLG</b>	inducible T-cell co-stimulator ligand	-	3	2	-	Bt.26695.2.A1_at	other
NCOA7	nuclear receptor coactivator 7	-	3	-	-	Bt.28087.1.S1_at	other
HS3ST3B1	heparan sulfate (glucosamine) 3-O-sulfotransferase 3B1	-	3	2	-	Bt.14272.1.A1_at	enzyme
ANTXR2	anthrax toxin receptor 2	-	3	-	-	Bt.23438.1.S1_at	other
GCLC	glutamate-cysteine ligase, catalytic subunit	-	2	-	-	Bt.16068.1.A1_at	enzyme
TTC9	tetratricopeptide repeat domain 9	-	2	-	2	Bt.23283.1.S1_at	other
<b>VEGFA</b>	vascular endothelial growth factor A	-	2	2	-	Bt.4138.1.S1_a_at	growth factor
SGSM2	small G protein signaling modulator 2	-	2	-	-	Bt.18576.1.S1_at	other
DCLK1	doublecortin-like kinase 1	-	2	2	-	Bt.19199.1.A1_at	kinase
PVR	poliovirus receptor	-	2	-	-	Bt.15798.1.S1_at	transmembrane receptor
SERTAD1	SERTA domain containing 1	-	2	-	-	Bt.5828.1.S1_at	transcription regulator
<b>PTGS1</b>	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	-	2	2	-	Bt.2151.1.S1_at	enzyme
CREB1	cAMP responsive element binding protein 1	-	2	-	-	Bt.4183.1.S1_at	transcription regulator
NOV	nephroblastoma overexpressed gene	-	2	-	-	Bt.13482.2.S1_at	growth factor
ARHGEF2	rho/rac guanine nucleotide exchange factor (GEF) 2	-	2	-	-	Bt.17672.1.S1_at	other
NHSL1	NHS-like 1	-	2	-	-	Bt.13492.1.S1_at	other
SMURF2	SMAD specific E3 ubiquitin protein ligase 2	-	2	-	-	Bt.28632.2.S1_at	enzyme
DAXX	death-domain associated protein	-	2	-	-	Bt.20069.1.S1_at	transcription regulator
<b>SBNO2</b>	strawberry notch homolog 2 (Drosophila)	-	2	-	-	Bt.10014.1.S1_at	other
RNF144A	ring finger protein 144A	-	2	2	-	Bt.26501.1.S1_at	other
ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1	-	2	-	-	Bt.29740.1.S1_at	transporter
SPTLC2	serine palmitoyltransferase, long chain base subunit 2	-	2	-	-	Bt.29178.1.S1_at	enzyme
<b>SELE</b>	selectin E	-	2	-	-	Bt.197.1.S1_at	other
<b>IL4R</b>	interleukin 4 receptor	-	2	-	-	Bt.24531.1.S1_at	transmembrane receptor
SSH2	slingshot homolog 2 (Drosophila)	-	2	-	-	Bt.29928.1.S1_at	phosphatase
AGPAT4	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltransferase, delta)	-	2	-	-	Bt.25871.1.A1_at	enzyme
HAS2	hyaluronan synthase 2	-	2	-	-	Bt.12927.1.S1_at	enzyme
PPTC7	PTC7 protein phosphatase homolog (S. cerevisiae)	-	2	-	-	Bt.11791.2.S1_at	phosphatase
PTH1H	parathyroid hormone-like hormone	-	2	-	-	Bt.12848.1.S1_at	other
LAMB3	laminin, beta 3	-	2	-	-	Bt.16740.1.A1_at	transporter

TXNL4B	thioredoxin-like 4B	-	2	-	-	Bt.20128.1.A1_at	enzyme
ZFP36L2	zinc finger protein 36, C3H type-like 2	-	2	-	-	Bt.19706.1.S1_at	transcription regulator
<b>F2RL1</b>	coagulation factor II (thrombin) receptor-like 1	-	2	-	-	Bt.28745.1.S1_at	G-protein coupled receptor
FOXA1	forkhead box A1	-	2	-	-	Bt.20832.1.S1_at	transcription regulator
NRG1	neuregulin 1	-	2	-	-	Bt.27974.1.S1_at	growth factor
SOX7	SRY (sex determining region Y)-box 7	-	2	-	-	Bt.22077.1.S1_at	transcription regulator
USP37	ubiquitin specific peptidase 37	-	2	-	-	Bt.29830.1.S1_at	peptidase
TGIF1	TGFB-induced factor homeobox 1	-	2	-	-	Bt.16329.1.A1_at	transcription regulator
<b>SOCS3</b>	suppressor of cytokine signaling 3	-	2	-	-	Bt.8137.1.S2_at	other
CDK6	cyclin-dependent kinase 6	-	2	-	-	Bt.25462.1.S1_at	kinase
ZC3HAV1	zinc finger CCCH-type, antiviral 1	-	2	-	-	Bt.15529.1.S1_at	other
RHEBL1	Ras homolog enriched in brain like 1	-	2	-	-	Bt.22959.1.S1_at	enzyme
SAMHD1	SAM domain and HD domain 1	-	2	-	-	Bt.942.2.S1_at	enzyme
FUT1	fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase, H blood group)	-	2	-	-	Bt.16029.1.S2_at	enzyme
PEL1	pellino homolog 1 (Drosophila)	-	2	-	-	Bt.16606.1.A1_at	other
<b>CYLD</b>	cylindromatosis (turban tumor syndrome)	-	2	-	-	Bt.27817.1.S1_at	transcription regulator
C20ORF117	chromosome 20 open reading frame 117	-	2	-	-	Bt.942.1.S1_at	other
<b>IFNAR1</b>	interferon (alpha, beta and omega) receptor 1	-	2	-	-	Bt.22665.1.S1_at	transmembrane receptor
GMEB1	glucocorticoid modulatory element binding protein 1	-	2	-	-	Bt.29088.1.A1_at	transcription regulator
BNIP1	BCL2/adenovirus E1B 19kD interacting protein like	-	2	-	-	Bt.14665.1.A1_at	other
<b>NFKB1</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta	-	2	2	-	Bt.20178.1.S1_at	transcription regulator
RBBP6	retinoblastoma binding protein 6	-	2	-	-	Bt.20304.1.S1_at	other
DUSP7	dual specificity phosphatase 7	-	2	-	-	Bt.3312.1.S1_at	phosphatase
SEC14L1	SEC14-like 1 (S. cerevisiae)	-	2	-	-	Bt.21705.1.S1_at	transporter
<b>ITGB6</b>	integrin, beta 6	-	2	-	-	Bt.9972.1.S1_at	other
NLK	nemo-like kinase	-	2	-	-	Bt.19762.1.A1_at	kinase
SQSTM1	sequestosome 1	-	2	-	-	Bt.28031.1.S1_s_at	transcription regulator
TBXAS1	thromboxane A synthase 1 (platelet)	-	-2	-	-	Bt.22339.1.A1_at	enzyme
REV3L	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)	-	-2	-	-	Bt.25319.1.A1_at	enzyme
TGFB1	transforming growth factor, beta receptor 1	-	-2	-	-	Bt.28.1.S1_at	kinase
SLC16A4	solute carrier family 16, member 4 (monocarboxylic acid transporter 5)	-	-2	-	-2	Bt.22085.1.S1_at	transporter
ADSS	adenylosuccinate synthase	-	-2	-	-	Bt.24907.1.A1_at	enzyme
HSPBAP1	HSPB (heat shock 27kDa) associated protein 1	-	-2	-	-	Bt.14384.1.A1_at	other
LGR4	leucine-rich repeat-containing G protein-coupled receptor 4	-	-2	-	-	Bt.17591.2.S1_at	G-protein coupled receptor
WDR44	WD repeat domain 44	-	-2	-	-	Bt.216.1.S1_at	other
ARMCX1	armadillo repeat containing, X-linked 1	-	-2	-	-	Bt.3216.1.A1_at	other
<b>GCNT1</b>	glucosaminyl (N-acetyl) transferase 1, core 2 (beta-1,6-N-acetylglucosaminyltransferase)	-	-2	-	-	Bt.17542.1.S1_at	enzyme
<b>EDNRA</b>	endothelin receptor type A	-	-2	-	-	Bt.25346.1.A1_at	transmembrane receptor
C10ORF78	chromosome 10 open reading frame 78	-	-2	-	-	Bt.23566.2.S1_at	other
G2E3	G2/M-phase specific E3 ubiquitin ligase	-	-2	-	-	Bt.19681.1.A1_at	enzyme
RNF7	ring finger protein 7	-	-2	-	-	Bt.1461.1.S1_at	other
ZBTB6	zinc finger and BTB domain containing 6	-	-2	-	-	Bt.16845.1.A1_at	other
HOXA10	homeobox A10	-	-2	-	-	Bt.21093.1.S1_at	transcription regulator
<b>HDAC7</b>	histone deacetylase 7	-	-2	-	-	Bt.2919.1.S1_a_at	transcription regulator
SOX4	SRY (sex determining region Y)-box 4	-	-2	-	-	Bt.12453.1.A1_at	transcription regulator
DUSP19	dual specificity phosphatase 19	-	-2	-	-	Bt.25075.1.A1_at	phosphatase
TNS3	tensin 3	-	-2	-	-	Bt.2399.1.S1_at	phosphatase
ASXL1	additional sex combs like 1 (Drosophila)	-	-2	-	-	Bt.10734.1.A1_at	other
LRRC2	leucine rich repeat containing 2	-	-2	-	-	Bt.22167.2.A1_at	other
LPP	LIM domain containing preferred translocation partner in lipoma	-	-2	-	-	Bt.26804.1.S1_at	other
NIPA2	non imprinted in Prader-Willi/Angelman syndrome 2	-	-2	-	-	Bt.25076.1.A1_at	other

IQCB1	IQ motif containing B1	-	-2	-	-	Bt.20448.1.S1_at	other
UNG	uracil-DNA glycosylase	-	-2	-	-	Bt.11128.1.S1_at	enzyme
<b>HPRT1</b>	hypoxanthine phosphoribosyltransferase 1	-	-2	-	-	Bt.16309.1.S1_at	enzyme
JPH1	junctionophilin 1	-	-2	-	-	Bt.16236.1.A1_at	other
<b>CBLB</b>	Cas-Br-M (murine) ecotropic retroviral transforming sequence b	-	-2	-	-	Bt.21203.1.S1_at	other
PYGO1	pygopus homolog 1 (Drosophila)	-	-2	-	-	Bt.16784.1.S1_at	other
HSPA2	heat shock 70kDa protein 2	-	-2	-	-	Bt.19759.1.S1_at	other
DLC1	deleted in liver cancer 1	-	-2	-	-	Bt.24236.1.S1_at	other
RNF39	ring finger protein 39	-	-2	-	-	Bt.17673.1.A1_at	other
B3GNT6	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 6 (core 3 synthase)	-	-2	-	-	Bt.24552.1.S1_at	enzyme
CALD1	caldesmon 1	-	-2	-	-	Bt.21294.1.A1_at	other
ELF5	E74-like factor 5 (ets domain transcription factor)	-	-2	-	-	Bt.12819.1.S1_at	transcription regulator
FBXL4	F-box and leucine-rich repeat protein 4	-	-2	-	-	Bt.21681.1.A1_at	other
GLIS2	GLIS family zinc finger 2	-	-2	-	-	Bt.27617.1.S1_at	transcription regulator
ATXN7L1	ataxin 7-like 1	-	-2	-	-	Bt.19100.1.A1_at	other
PPP2R1B	protein phosphatase 2 (formerly 2A), regulatory subunit A, beta isoform	-	-2	-	-	Bt.6321.1.S1_at	phosphatase
<b>MAPK14</b>	mitogen-activated protein kinase 14	-	-2	-	-	Bt.18473.1.S1_at	kinase
RUNX2	runt-related transcription factor 2	-	-2	-	-	Bt.19978.1.A1_at	transcription regulator
GATA2	GATA binding protein 2	-	-2	-	-	Bt.6408.2.A1_at	transcription regulator
TFB1M	transcription factor B1, mitochondrial	-	-2	-	-	Bt.9999.2.A1_at	transcription regulator
CDC6	cell division cycle 6 homolog (S. cerevisiae)	-	-2	-2	-2	Bt.24218.1.S1_at	other
NR2F1	nuclear receptor subfamily 2, group F, member 1	-	-2	-	-	Bt.543.1.S1_at	ligand-dependent nuclear receptor
RMND1	required for meiotic nuclear division 1 homolog (S. cerevisiae)	-	-3	-	-	Bt.16231.1.S1_at	other
TRPS1	trichorhinophalangeal syndrome I	-	-3	-	-	Bt.8793.1.S1_at	transcription regulator
FANCM	Fanconi anemia, complementation group M	-	-3	-	-	Bt.21150.1.A1_at	enzyme
TJP3	tight junction protein 3 (zona occludens 3)	-	-3	-	-	Bt.8484.1.S1_at	other
CYP2U1	cytochrome P450, family 2, subfamily U, polypeptide 1	-	-3	-	-	Bt.28113.1.S1_at	enzyme
PMS1	PMS1 postmeiotic segregation increased 1 (S. cerevisiae)	-	-3	-	-	Bt.20671.1.A1_at	other
CDCA7	cell division cycle associated 7	-	-3	-	-	Bt.6441.1.S1_at	other
BAHD1	bromo adjacent homology domain containing 1	-	-3	-	-	Bt.21388.2.A1_at	other
NAP1L5	nucleosome assembly protein 1-like 5	-	-3	-3	-	Bt.24901.1.A1_at	other
FAM46B	family with sequence similarity 46, member B	-	-3	-	-	Bt.6658.2.A1_at	other
IL17RD	interleukin 17 receptor D	-	-3	-	-	Bt.20936.1.S1_at	other
ZNF271	zinc finger protein 271	-2	-3	-	-	Bt.2850.1.A1_at	other
CTTNBP2	cortactin binding protein 2	-	-3	-3	-	Bt.25352.1.A1_at	other
KLF11	Kruppel-like factor 11	-	-3	-	-	Bt.16916.1.S1_at	transcription regulator
ZNF608	zinc finger protein 608	-	-3	-	-	Bt.18479.1.A1_at	other
RHOBTB1	Rho-related BTB domain containing 1	-	-3	-	-	Bt.26483.1.A1_at	enzyme
ZNF238	zinc finger protein 238	-	-3	-	-	Bt.15860.1.S1_at	transcription regulator
CLDN3	claudin 3	-	-3	-2	-	Bt.6074.1.S1_at	transmembrane receptor
GPAM	glycerol-3-phosphate acyltransferase, mitochondrial	-	-3	-	-	Bt.29570.1.S1_at	enzyme
OVOL2	ovo-like 2 (Drosophila)	-	-3	-3	-	Bt.14034.1.A1_at	transcription regulator
PDK4	pyruvate dehydrogenase kinase, isozyme 4	-	-3	-	-	Bt.23505.1.S1_at	kinase
AMIGO2	adhesion molecule with Ig-like domain 2	-	-3	-	-	Bt.12294.2.A1_at	other
CCNE2	cyclin E2	-	-3	-	-	Bt.16141.1.S1_at	other
FZD2	frizzled homolog 2 (Drosophila)	-	-3	-	-	Bt.16951.1.A1_at	G-protein coupled receptor
<b>ANKRD1</b>	ankyrin repeat domain 1 (cardiac muscle)	-	-3	-	-	Bt.15836.2.S1_at	transcription regulator
BCOR	BCL6 co-repressor	-	-3	-	-	Bt.17758.2.A1_at	transcription regulator
KANK2	KN motif and ankyrin repeat domains 2	-	-3	-	-	Bt.7727.1.S1_at	transcription regulator
PANK1	pantothenate kinase 1	-	-3	-	-	Bt.21500.1.A1_at	kinase
PRICKLE1	prickle homolog 1 (Drosophila)	-	-3	-3	-2	Bt.18126.1.A1_at	other

PPM1K	protein phosphatase 1K (PP2C domain containing)	-	-4	-	-	Bt.28238.1.A1_at	phosphatase
<b>CFTR</b>	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7)	-2	-4	-2	-	Bt.19505.1.A1_at	ion channel
ORC5L	origin recognition complex, subunit 5-like (yeast)	-	-4	-3	-2	Bt.12135.1.S1_at	other
PHF17	PHD finger protein 17	-	-5	-	-	Bt.12417.1.S1_at	other
UTRN	utrophin	-	-5	-	-	Bt.19217.1.A1_at	transmembrane receptor
RASL11B	RAS-like, family 11, member B	-	-5	-	-	Bt.1974.1.S1_at	enzyme
LRIG3	leucine-rich repeats and immunoglobulin-like domains 3	-	-5	-	-	Bt.22664.1.A1_at	other
CLDN23	claudin 23	-	-6	-2	-2	Bt.27959.1.S1_at	other

#### Maximum regulated 6 h after stimulation

<b>CCL5</b>	chemokine (C-C motif) ligand 5	7	134	175	106	Bt.552.1.S1_at	cytokine
RTP4	receptor (chemosensory) transporter protein 4	-	17	45	13	Bt.24813.1.A1_at	other
<b>MX2</b>	myxovirus (influenza virus) resistance 2	-	18	43	17	Bt.8143.1.S1_at	enzyme
<b>ISG15</b>	ISG15 ubiquitin-like modifier	2	20	28	10	Bt.12304.1.S1_at	other
<b>S100A9</b>	S100 calcium binding protein A9	-	19	26	24	Bt.16201.1.S1_at	other
<b>IFI44L</b>	interferon-induced protein 44-like	-	6	22	8	Bt.19620.1.A1_at	other
<b>MX1</b>	myxovirus (influenza virus) resistance 1	-	11	20	8	Bt.4675.1.S1_a_at	enzyme
<b>IFI44</b>	interferon-induced protein 44	-	4	20	7	Bt.20785.1.A1_at	other
<b>GBP2</b>	guanylate binding protein 2, interferon-inducible	-	9	19	6	Bt.25303.1.A1_at	enzyme
<b>OAS1</b>	2',5'-oligoadenylate synthetase 1	-	10	18	6	Bt.20891.1.S1_at	enzyme
<b>MMP9</b>	matrix metalloproteinase 9	-	9	17	12	Bt.4714.1.S1_at	peptidase
EIF4E	eukaryotic translation initiation factor 4E	-	12	14	4	Bt.17195.1.A1_at	translation regulator
<b>HIF1A</b>	hypoxia inducible factor 1, alpha subunit	-	-	12	11	Bt.25110.1.A1_at	transcription regulator
<b>TNFSF13B</b>	tumor necrosis factor (ligand) superfamily, member 13b	-	6	12	3	Bt.24855.2.S1_at	cytokine
<b>IFIH1</b>	interferon induced with helicase C domain 1	-	7	11	4	Bt.24098.1.A1_at	enzyme
USP18	ubiquitin specific peptidase 18	-	10	11	2	Bt.23233.1.S1_at	peptidase
<b>CD40</b>	CD40 molecule, TNF receptor superfamily member 5	2	9	10	4	Bt.13130.1.S1_at	transmembrane receptor
<b>DDX58</b>	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	-	4	9	4	Bt.24033.1.A1_at	enzyme
RNF213	ring finger protein 213	-	4	8	3	Bt.9179.1.A1_at	other
DYNLT3	dynein, light chain, Tctex-type 3	-	4	8	3	Bt.22498.1.A1_at	other
<b>IKBKE</b>	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon	-	5	8	6	Bt.1472.1.S1_at	kinase
IFI16	interferon, gamma-inducible protein 16	-	4	8	3	Bt.22021.1.S1_at	transcription regulator
<b>ISG20</b>	interferon stimulated exonuclease gene 20kDa	-	5	7	3	Bt.22275.1.A1_at	enzyme
<b>IFI6</b>	interferon, alpha-inducible protein 6	-	3	7	7	Bt.8436.1.S1_at	other
ATP6V0A4	ATPase, H+ transporting, lysosomal V0 subunit a4	-	4	7	5	Bt.22204.1.A1_at	transporter
STC1	stanniocalcin 1	-	-	7	7	Bt.7128.1.S1_at	kinase
CADPS	Ca++-dependent secretion activator	-	3	7	2	Bt.16070.1.S1_at	other
<b>TNIP1</b>	TNFAIP3 interacting protein 1	-	6	6	4	Bt.5432.1.S1_at	other
SP100	SP100 nuclear antigen	-	2	6	2	Bt.21851.1.A1_at	transcription regulator
SAMD9	sterile alpha motif domain containing 9	-	3	6	2	Bt.28624.1.S1_at	other
SCUBE3	signal peptide, CUB domain, EGF-like 3	-	5	6	-	Bt.19909.1.A1_at	other
KLK10	kallikrein-related peptidase 10	-	6	6	3	Bt.24568.1.A1_at	peptidase
SLC6A14	solute carrier family 6 (amino acid transporter), member 14	-	4	6	4	Bt.16453.1.A1_at	transporter
IPCEF1	interaction protein for cytohesin exchange factors 1	-	2	5	5	Bt.24480.1.S1_at	enzyme
GBP4	guanylate binding protein 4	-	-	5	-	Bt.18440.3.A1_at	enzyme
<b>CD38</b>	CD38 molecule	-	3	5	4	Bt.27365.1.A1_at	enzyme
PARP14	poly (ADP-ribose) polymerase family, member 14	-	3	5	-	Bt.14676.1.S1_at	other
<b>HCK</b>	hemopoietic cell kinase	-	3	5	4	Bt.22050.1.S1_at	kinase
GBP3	guanylate binding protein 3	-	3	5	3	Bt.9296.1.A1_at	enzyme
<b>DMBT1</b>	deleted in malignant brain tumors 1	-	3	5	4	Bt.9632.2.S1_at	transmembrane receptor

XAF1	XIAP associated factor 1	-	2	5	3	Bt.5259.1.S1_at	other
<b>SLC2A3</b>	solute carrier family 2 (facilitated glucose transporter), member 3	-	2	5	4	Bt.3964.1.S1_at	transporter
UBA7	ubiquitin-like modifier activating enzyme 7	-	2	5	4	Bt.2294.1.S1_a_at	enzyme
<b>ADM</b>	adrenomedullin	-	-	4	4	Bt.2047.1.S1_at	other
GBP1	guanylate binding protein 1, interferon-inducible, 67kDa	-	3	4	2	Bt.24012.1.A1_at	enzyme
PLEKHA4	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 4	-	3	4	-	Bt.26665.1.S1_at	other
IGFBP3	insulin-like growth factor binding protein 3	-	3	4	-	Bt.422.1.S2_at	other
CASP7	caspase 7, apoptosis-related cysteine peptidase	-	3	4	2	Bt.28094.1.S1_at	peptidase
DTX3L	deltex 3-like (Drosophila)	-	2	4	-	Bt.28523.1.S1_at	other
<b>TRIM21</b>	tripartite motif-containing 21	-	3	4	-	Bt.22980.1.S1_at	other
<b>CASP4</b>	caspase 4, apoptosis-related cysteine peptidase	-	3	4	3	Bt.16018.1.S2_at	peptidase
<b>EIF2AK2</b>	eukaryotic translation initiation factor 2-alpha kinase 2	-	3	4	2	Bt.20923.1.S1_at	kinase
DKK1	dickkopf homolog 1 (Xenopus laevis)	-	-2	4	-	Bt.13880.1.S1_at	growth factor
PARP9	poly (ADP-ribose) polymerase family, member 9	-	-	4	2	Bt.20409.1.S1_at	other
ARRDC4	arrestin domain containing 4	-	3	4	3	Bt.9792.1.S1_at	other
<b>IRF7</b>	interferon regulatory factor 7	-	2	4	-	Bt.5768.2.S1_at	transcription regulator
TRIM25	tripartite motif-containing 25	-	3	4	2	Bt.13869.1.A1_at	transcription regulator
<b>PML</b>	promyelocytic leukemia	-	3	3	2	Bt.12638.1.S1_at	transcription regulator
<b>NFKB2</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)	-	3	3	2	Bt.20288.1.S1_at	transcription regulator
CYP2J2	cytochrome P450, family 2, subfamily J, polypeptide 2	-	2	3	-	Bt.29006.1.S1_at	enzyme
TRIM5	tripartite motif-containing 5	-	-	3	-	Bt.16983.1.S1_at	other
<b>SP140</b>	SP140 nuclear body protein	-	-	3	-	Bt.27830.1.A1_at	transcription regulator
PNPT1	polyribonucleotide nucleotidyltransferase 1	-	2	3	-	Bt.5684.1.S1_at	enzyme
TRIM6	tripartite motif-containing 6	-	3	3	-	Bt.14047.1.A1_at	other
STAC	SH3 and cysteine rich domain	-	2	3	3	Bt.3547.1.A1_at	other
BHLHE41	basic helix-loop-helix family, member e41	2	2	3	-	Bt.12583.1.A1_at	transcription regulator
STRA6	stimulated by retinoic acid gene 6 homolog (mouse)	-	3	3	-	Bt.3196.1.S1_at	other
TDRD7	tudor domain containing 7	-	-	3	-	Bt.25103.1.S1_at	other
GTF2B	general transcription factor IIB	-	3	3	2	Bt.5540.1.S1_a_at	transcription regulator
<b>CD14</b>	CD14 molecule	-	2	3	-	Bt.4285.1.S1_at	transmembrane receptor
COIL	coilin	-	3	3	2	Bt.9075.1.S1_at	other
YPEL2	yippee-like 2 (Drosophila)	-	-	3	3	Bt.27887.1.S1_at	other
VLDLR	very low density lipoprotein receptor	-	-	3	-	Bt.29381.1.S1_at	transporter
TNNC1	troponin C type 1 (slow)	-	-	3	2	Bt.26998.1.A1_s_at	other
SLC2A6	solute carrier family 2 (facilitated glucose transporter), member 6	-	3	3	2	Bt.25025.1.S1_at	transporter
CYP7B1	cytochrome P450, family 7, subfamily B, polypeptide 1	-	-	3	2	Bt.19337.1.S1_at	enzyme
SLC16A3	solute carrier family 16, member 3 (monocarboxylic acid transporter 4)	-	-	3	-	Bt.24802.2.S1_a_at	transporter
RTP3	receptor (chemosensory) transporter protein 3	-	2	3	3	Bt.24992.1.S1_at	other
PDXK	pyridoxal (pyridoxine, vitamin B6) kinase	-	2	3	3	Bt.7641.2.S1_a_at	kinase
<b>ABHD2</b>	abhydrolase domain containing 2	-	3	3	-	Bt.27404.1.S1_at	enzyme
SVIL	supervillin	-	3	3	-	Bt.4329.1.S1_at	other
ADAR	adenosine deaminase, RNA-specific	-	-	3	-	Bt.23971.1.S1_at	enzyme
<b>STAT2</b>	signal transducer and activator of transcription 2, 113kDa	-	-	3	-	Bt.24492.1.S1_at	transcription regulator
KCTD11	potassium channel tetramerisation domain containing 11	-	-	3	3	Bt.24709.1.S1_at	other
HERC6	hect domain and RLD 6	-	-	3	-	Bt.27463.1.A1_at	enzyme
GBP6	guanylate binding protein family, member 6	-	-	3	-	Bt.18440.1.S1_at	enzyme
<b>TNFRSF6B</b>	tumor necrosis factor receptor superfamily, member 6b, decoy	-	-	3	2	Bt.27361.1.A1_at	transmembrane receptor
PHF15	PHD finger protein 15	-	-	3	-	Bt.29894.1.S1_at	other
IL15	interleukin 15	-	-	3	-	Bt.17488.1.A1_at	cytokine
TGFBI	transforming growth factor, beta-induced, 68kDa	-	2	3	-	Bt.4670.1.S1_at	other
ADFP	adipose differentiation-related protein	-	-	3	-	Bt.2568.1.S1_at	other

EHD3	EH-domain containing 3	-	-	3	-	Bt.3273.1.A1_at	other
<b>NDRG1</b>	N-myc downstream regulated 1	-	-	2	-	Bt.1537.1.S1_at	kinase
<b>FZRL2</b>	coagulation factor II (thrombin) receptor-like 2	-	2	2	2	Bt.1345.1.S1_at	G-protein coupled receptor
GUCY1B3	guanylate cyclase 1, soluble, beta 3	-	-	2	-	Bt.4394.1.S1_at	enzyme
EGLN3	egl nine homolog 3 (C. elegans)	-	-	2	2	Bt.23232.1.S1_at	enzyme
RNF128	ring finger protein 128	-	-	2	-	Bt.29416.1.A1_at	enzyme
BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3	-	-	2	-	Bt.26692.1.S1_a_at	other
FMNL3	formin-like 3	-	2	2	-	Bt.1411.1.S1_at	other
SLC25A19	solute carrier family 25 (mitochondrial thiamine pyrophosphate carrier), member 19	-	-	2	-	Bt.22773.1.S1_at	transporter
NOSTRIN	nitric oxide synthase trafficker	-	-	2	-	Bt.17865.1.A1_at	transcription regulator
FCHSD2	FCH and double SH3 domains 2	-	-	2	-	Bt.22584.1.A1_at	other
<b>LYN</b>	v-yes-1 Yamaguchi sarcoma viral related oncogene homolog	-	-	2	-	Bt.10831.2.S1_at	kinase
<b>TAP1</b>	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	-	-	2	-	Bt.20416.1.S1_at	transporter
ODZ2	odz, odd Oz/ten-m homolog 2 (Drosophila)	-	-	2	-	Bt.25045.1.S1_at	other
ANO1	anoctamin 1, calcium activated chloride channel	-	2	2	-	Bt.17928.1.A1_at	ion channel
IFITM1	interferon induced transmembrane protein 1 (9-27)	-	-	2	2	Bt.22978.1.S1_a_at	other
<b>SLC1A3</b>	solute carrier family 1 (glial high affinity glutamate transporter), member 3	-	-	2	2	Bt.361.1.S1_at	transporter
PLEKHF1	pleckstrin homology domain containing, family F (with FYVE domain) member 1	-	-	2	-	Bt.2421.1.A1_at	other
PARP12	poly (ADP-ribose) polymerase family, member 12	-	-	2	-	Bt.18116.2.A1_at	other
C10ORF72	chromosome 10 open reading frame 72	-	-	2	2	Bt.1938.1.S1_at	other
FOXF1	forkhead box F1	-	-	2	-	Bt.10180.1.A1_at	transcription regulator
ROBO1	roundabout, axon guidance receptor, homolog 1 (Drosophila)	-	-	2	2	Bt.23672.1.A1_at	transmembrane receptor
PVRL2	poliovirus receptor-related 2 (herpesvirus entry mediator B)	-	-	2	-	Bt.4419.1.S1_at	other
WNT5A	wingless-type MMTV integration site family, member 5A	-	-	2	-	Bt.4374.1.S1_at	other
TREX1	three prime repair exonuclease 1	-	-	2	-	Bt.7472.1.S1_at	enzyme
SEMA6D	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D	-	-	2	-	Bt.19862.2.S1_at	other
OPTN	optineurin	-	-	2	2	Bt.17777.1.S1_at	other
APOL2	apolipoprotein L, 2	-	-	2	-	Bt.28313.1.S1_at	other
SLC34A3	solute carrier family 34 (sodium phosphate), member 3	-	-	2	-	Bt.21760.1.S1_at	transporter
RNF114	ring finger protein 114	-	2	2	-	Bt.760.1.S1_at	other
MGP	matrix Gla protein	-	-	2	-	Bt.3595.1.S1_at	other
SAA3P	serum amyloid A3 pseudogene	-	-	2	2	Bt.22322.1.S1_at	other
TRIM38	tripartite motif-containing 38	-	-	2	-	Bt.27071.1.S1_at	other
SLC24A2	solute carrier family 24 (sodium/potassium/calcium exchanger), member 2	-	-	2	-	Bt.28142.1.S1_at	transporter
TLE4	transducin-like enhancer of split 4 (E(sp1) homolog, Drosophila)	-	-	2	-	Bt.22413.1.A1_at	transcription regulator
GDAP2	ganglioside induced differentiation associated protein 2	-	-	2	-	Bt.18740.1.S1_at	other
CAMK1D	calcium/calmodulin-dependent protein kinase ID	-	-	2	-	Bt.17491.1.A1_at	kinase
PSMF1	proteasome (prosome, macropain) inhibitor subunit 1 (PI31)	-	-	2	-	Bt.20110.1.S1_at	other
DDX24	DEAD (Asp-Glu-Ala-Asp) box polypeptide 24	-	-	2	-	Bt.9433.1.S1_at	enzyme
DGKI	diacylglycerol kinase, iota	-	-2	-2	-	Bt.22642.1.A1_at	kinase
MAGEF1	melanoma antigen family F, 1	-	-2	-2	-	Bt.6114.1.S1_at	other
TM7SF3	transmembrane 7 superfamily member 3	-	-	-2	-	Bt.22720.2.S1_a_at	other
TAT	tyrosine aminotransferase	-	-	-2	-	Bt.23513.1.S1_at	enzyme
MAP2	microtubule-associated protein 2	-	-	-2	-	Bt.569.1.S1_at	other
PCBD1	pterin-4 alpha-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 alpha	-	-	-2	-	Bt.23171.2.S1_at	transcription regulator
AGFG2	ArfGAP with FG repeats 2	-	-	-2	-	Bt.7324.1.S1_at	other
SORBS1	sorbin and SH3 domain containing 1	-	-	-2	-	Bt.13306.1.S1_at	other
<b>CNIH</b>	cornichon homolog (Drosophila)	-	-	-2	-	Bt.2810.1.A1_at	other
H1FX	H1 histone family, member X	-	-	-2	-	Bt.1788.1.A1_at	other
MBNL3	muscleblind-like 3 (Drosophila)	-	-	-2	-	Bt.20823.2.S1_at	other
PBX1	pre-B-cell leukemia homeobox 1	-	-	-2	-	Bt.28854.1.S1_at	transcription regulator



GPR125	G protein-coupled receptor 125	-	-	-2	-	Bt.6298.1.S1_at	G-protein coupled receptor
SLC35F2	solute carrier family 35, member F2	-	-	-2	-2	Bt.21079.1.A1_at	other
SH3BGR2	SH3 domain binding glutamic acid-rich protein like 2	-	-	-2	-	Bt.16036.1.S1_at	other
RRM2	ribonucleotide reductase M2 polypeptide	-	-	-2	-2	Bt.10648.1.S1_at	enzyme
UHRF1	ubiquitin-like with PHD and ring finger domains 1	-	-	-2	-	Bt.28379.1.S1_at	transcription regulator
<b>RHOB</b>	ras homolog gene family, member B	-	-2	-3	-2	Bt.26793.1.S1_at	enzyme
ANKRD23	ankyrin repeat domain 23	-	-2	-3	-2	Bt.20316.1.S1_at	other
HMGB3	high-mobility group box 3	-	-	-3	-	Bt.11711.1.A1_at	other
HMMR	hyaluronan-mediated motility receptor (RHAMM)	-	-	-3	-	Bt.12993.1.S1_at	other
MTUS1	mitochondrial tumor suppressor 1	-	-	-3	-2	Bt.8319.3.S1_a_at	other
GRIP1	glutamate receptor interacting protein 1	-	-	-3	-	Bt.27472.1.A1_at	other
SIPA1L1	signal-induced proliferation-associated 1 like 1	-	-2	-4	-	Bt.19949.1.A1_at	other
FOLR1	folate receptor 1 (adult)	-2	-2	-4	-	BtAffx.29968.1.S1_a	transporter
<b>BLNK</b>	B-cell linker	-	-	-5	-3	Bt.24520.1.A1_at	other
SDPR	serum deprivation response (phosphatidylserine binding protein)	-	-2	-5	-	Bt.11055.1.S1_at	other

#### Maximum regulated 24 h after stimulation

<b>SAA3</b>	serum amyloid A3	<b>13</b>	<b>146</b>	<b>299</b>	<b>612</b>	Bt.278.1.S1_at	other
<b>DEFB4/LAP</b>	defensin, beta 4	-	<b>3</b>	<b>4</b>	<b>92</b>	Bt.571.1.S1_at	other
<b>HP</b>	haptoglobin	-	<b>26</b>	<b>53</b>	<b>64</b>	Bt.12553.1.S1_at	peptidase
<b>IL18BP</b>	interleukin 18 binding protein	-	<b>19</b>	<b>30</b>	<b>32</b>	Bt.22116.1.A1_at	other
<b>LTF</b>	lactotransferrin	-	<b>29</b>	<b>22</b>	<b>29</b>	Bt.7780.1.S1_at	peptidase
SDS	serine dehydratase	-	<b>4</b>	<b>14</b>	<b>27</b>	Bt.5878.1.A1_at	enzyme
<b>SLPI</b>	secretory leukocyte peptidase inhibitor	-	-	<b>4</b>	<b>25</b>	Bt.15484.2.A1_at	other
<b>CXCL6</b>	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	<b>8</b>	<b>19</b>	<b>18</b>	<b>20</b>	Bt.7165.1.S1_at	cytokine
CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)	-	<b>2</b>	<b>9</b>	<b>17</b>	Bt.5238.1.S1_at	enzyme
<b>CFB</b>	complement factor B	-	<b>6</b>	<b>10</b>	<b>16</b>	Bt.13542.1.S1_at	peptidase
<b>MUC1</b>	mucin 1, cell surface associated	-	<b>2</b>	<b>3</b>	<b>12</b>	Bt.9561.1.S1_at	other
<b>S100A8</b>	S100 calcium binding protein A9	-	<b>8</b>	<b>9</b>	<b>11</b>	Bt.9360.1.S1_at	other
<b>IFI27L2</b>	interferon, alpha-inducible protein 27-like 2	-	<b>3</b>	<b>9</b>	<b>11</b>	Bt.11259.1.S1_at	other
<b>C2</b>	complement component 2	-	-	<b>4</b>	<b>9</b>	Bt.24345.1.S1_at	peptidase
PLAC8	placenta-specific 8	-	-	<b>7</b>	<b>9</b>	Bt.15912.1.S1_at	other
<b>LGALS9</b>	lectin, galactoside-binding, soluble, 9	-	<b>2</b>	<b>4</b>	<b>8</b>	Bt.8906.1.S1_at	other
UBD	ubiquitin D	-	-	<b>2</b>	<b>7</b>	Bt.5897.1.S1_at	other
<b>HLA-DQA1</b>	major histocompatibility complex, class II, DQ alpha 1	-	-	-	<b>7</b>	Bt.4751.1.S1_a_at	transmembrane receptor
TSPAN1	tetraspanin 1	-	-	-	<b>6</b>	Bt.13362.1.S1_at	other
PIP5K1B	phosphatidylinositol-4-phosphate 5-kinase, type I, beta	-	<b>4</b>	<b>6</b>	<b>6</b>	Bt.20732.1.A1_at	kinase
C1S	complement component 1, s subcomponent	-	-	<b>3</b>	<b>6</b>	Bt.1491.1.S1_at	peptidase
<b>APOA1</b>	apolipoprotein A-I	-	<b>2</b>	<b>3</b>	<b>6</b>	Bt.1229.1.S1_at	transporter
FAM14A	family with sequence similarity 14, member A	-	<b>2</b>	<b>5</b>	<b>6</b>	Bt.9779.1.S1_at	other
<b>S100A12</b>	S100 calcium binding protein A12	-	<b>4</b>	<b>5</b>	<b>6</b>	Bt.357.1.S1_at	other
<b>APLN</b>	apelin	-	-	<b>5</b>	<b>6</b>	Bt.6778.1.S1_at	other
SLC5A1	solute carrier family 5 (sodium/glucose cotransporter), member 1	-	<b>2</b>	<b>3</b>	<b>5</b>	Bt.28068.1.S1_at	transporter
DAO	D-amino-acid oxidase	-	-	<b>2</b>	<b>5</b>	Bt.22705.1.A1_at	enzyme
<b>IL33</b>	interleukin 33	-	-	<b>2</b>	<b>5</b>	Bt.22094.1.A1_at	cytokine
<b>OPRM1</b>	opioid receptor, mu 1	-	-	<b>5</b>	<b>5</b>	Bt.21685.1.A1_at	G-protein coupled receptor
<b>LTB</b>	lymphotoxin beta (TNF superfamily, member 3)	-	<b>2</b>	<b>3</b>	<b>5</b>	Bt.21431.1.S1_at	cytokine
TGM3	transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase)	-	-	<b>2</b>	<b>5</b>	Bt.13628.1.S1_at	enzyme
<b>C3</b>	complement component 3	-	-	<b>2</b>	<b>5</b>	Bt.4209.2.S1_at	peptidase
KIAA1324	KIAA1324	-	-	-	<b>4</b>	Bt.28694.1.S1_at	other

CRYM	crystallin, mu	-	-	2	4	Bt.2913.1.A1_at	enzyme
<b>CDO1</b>	cysteine dioxygenase, type I	-	-	2	4	Bt.2723.1.A1_at	enzyme
KAL1	Kallmann syndrome 1 sequence	-	-	-	4	Bt.9679.1.S1_at	other
ALOX15B	arachidonate 15-lipoxygenase, type B	-	-	2	4	Bt.12801.1.S1_at	enzyme
ADAMTSS	ADAM metalloproteinase with thrombospondin type 1 motif, 5	-	3	3	4	Bt.24124.1.A1_at	peptidase
DAB1	disabled homolog 1 (Drosophila)	-	2	-	4	Bt.23779.1.A1_at	other
<b>SLC7A2</b>	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	-	3	3	4	Bt.5943.1.S1_at	transporter
BACE2	beta-site APP-cleaving enzyme 2	-	-	2	3	Bt.7130.1.S1_at	peptidase
OLFML2A	olfactomedin-like 2A	-	-	-	3	Bt.11679.1.S1_at	other
CA2	carbonic anhydrase XII	-	-	3	3	Bt.6261.1.S1_at	enzyme
QSOX1	quiescin Q6 sulfhydryl oxidase 1	-	3	3	3	Bt.23098.1.S1_at	enzyme
FMO4	flavin containing monooxygenase 4	-	2	3	3	Bt.5771.1.S1_at	enzyme
CDKN1C	cyclin-dependent kinase inhibitor 1C (p57, Kip2)	-	-	-	3	Bt.4804.2.A1_at	other
AGR2	anterior gradient homolog 2 (Xenopus laevis)	-	2	2	3	Bt.29129.1.S1_at	other
USP54	ubiquitin specific peptidase 54	-	3	3	3	Bt.13345.1.A1_at	peptidase
UPP1	uridine phosphorylase 1	-	-	3	3	Bt.20327.1.S1_a_at	enzyme
CAPN6	calpain 6	-	-	-	3	Bt.10150.1.S1_at	peptidase
<b>HLA-DRA</b>	major histocompatibility complex, class II, DR alpha	-	-	-	3	Bt.8552.1.S1_at	transmembrane receptor
HTR2A	5-hydroxytryptamine (serotonin) receptor 2A	-	-	2	3	Bt.25378.1.A1_at	G-protein coupled receptor
ACSL6	acyl-CoA synthetase long-chain family member 6	-	-	-	3	Bt.11904.1.S1_at	enzyme
SLCO3A1	solute carrier organic anion transporter family, member 3A1	-	-	2	3	Bt.27973.1.S1_at	transporter
<b>HLA-DQB1</b>	major histocompatibility complex, class II, DQ beta 1	-	-	-	3	Bt.350.1.S1_x_at	transmembrane receptor
DCBLD2	discoidin, CUB and LCCL domain containing 2	-	-	-	3	Bt.7728.2.S1_at	other
SLC1A1	solute carrier family 1 (neuronal/epithelial high affinity glutamate transporter, system Xag), member 1	-	-	2	3	Bt.23659.1.S1_at	transporter
COX7A1	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	-	-	3	3	Bt.76.1.S1_at	enzyme
SFRP4	secreted frizzled-related protein 4	-	-	-	2	Bt.3540.1.S1_at	transmembrane receptor
SLAMF9	SLAM family member 9	-	-	-	2	Bt.26229.1.A1_at	other
IMPA2	inositol(myo)-1(or 4)-monophosphatase 2	-	-	-	2	Bt.1655.1.A1_at	phosphatase
ERO1L	ERO1-like (S. cerevisiae)	-	-	2	2	Bt.29332.1.A1_at	enzyme
FGL2	fibrinogen-like 2	-	-	-	2	Bt.9202.1.S1_at	peptidase
<b>MMP13</b>	matrix metalloproteinase 13 (collagenase 3)	-	-	-	2	Bt.26268.1.A1_at	peptidase
GRIK3	glutamate receptor, ionotropic, kainate 3	-	-	-	2	Bt.671.1.A1_at	ion channel
<b>CD200</b>	CD200 molecule	-	-	-	2	Bt.5861.1.S1_at	other
C6ORF108	solute carrier family 44, member 4	-	-	2	2	Bt.24374.1.S1_at	other
PFKFB3	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	-	-	2	2	Bt.12314.1.S1_at	kinase
FOXQ1	forkhead box Q1	-	-	-	2	Bt.15658.1.S1_at	transcription regulator
STK38L	serine/threonine kinase 38 like	-	-	2	2	Bt.23995.1.A1_at	kinase
ECM1	extracellular matrix protein 1	-	-	-	2	Bt.5525.1.S1_at	transporter
<b>HLA-A</b>	major histocompatibility complex, class I, A	-	-	2	2	Bt.27760.1.S1_at	transmembrane receptor
LY6E	lymphocyte antigen 6 complex, locus E	-	-	-	2	Bt.2346.1.S1_at	other
ARRB1	arrestin, beta 1	-	-	2	2	Bt.4018.1.S1_at	other
HSD3B1	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1	-	-	-	2	Bt.4760.1.S1_at	enzyme
FNBP1	formin binding protein 1	-	2	2	2	Bt.10381.1.S1_at	enzyme
SYT11	synaptotagmin XI	-	-	-	2	Bt.21873.1.S1_at	transporter
SLC9A7	solute carrier family 9 (sodium/hydrogen exchanger), member 7	-	-	-	2	Bt.21956.1.S1_at	transporter
GPC6	glypican 6	-	-	-	2	Bt.27332.1.A1_at	transmembrane receptor
GCA	granulocitin, EF-hand calcium binding protein	-	-	-	2	Bt.25269.1.S1_at	other
<b>CCL28</b>	chemokine (C-C motif) ligand 28	-	-	-	2	Bt.16745.1.A1_at	cytokine
YPEL5	yippee-like 5 (Drosophila)	-	-	-	2	Bt.5748.1.S1_at	other
USP20	ubiquitin specific peptidase 20	-	-	-	2	Bt.6244.1.S1_at	peptidase
QRSL1	glutaminyl-tRNA synthase (glutamine-hydrolyzing)-like 1	-	-	-	2	Bt.29191.1.A1_at	enzyme

PPP4R4	protein phosphatase 4, regulatory subunit 4	-	-	-	2	Bt.20430.1.A1_at	other
XDH	xanthine dehydrogenase	-	-	-	2	Bt.5403.1.S1_at	enzyme
<b>ICAM3</b>	intercellular adhesion molecule 3	-	-	-	2	Bt.4293.1.S1_at	other
<b>AIF1</b>	allograft inflammatory factor 1	-	-	-	2	Bt.23278.1.S1_at	other
<b>HLA-DRB1</b>	major histocompatibility complex, class II, DR beta 1	-	-	-	2	Bt.28011.1.S1_at	transmembrane receptor
TMEM204	transmembrane protein 204	-	-	-	2	Bt.6054.1.S1_at	other
<b>CD74</b>	CD74 molecule, major histocompatibility complex, class II invariant chain	-	-	-	2	Bt.23174.1.S1_at	transmembrane receptor
JAM2	junctional adhesion molecule 2	-	-	-	2	Bt.18203.1.A1_at	other
<b>MBP</b>	myelin basic protein	-	-	-	2	Bt.12606.2.S1_at	other
HHAT	hedgehog acyltransferase	-	-	-	2	Bt.18717.1.A1_at	enzyme
CA12	carbonic anhydrase II	-	-	-	2	Bt.22854.1.S1_at	enzyme
<b>LTBP1</b>	latent transforming growth factor beta binding protein 1	-	-	-	2	Bt.12315.1.S1_at	other
C1QTNF5	C1q and tumor necrosis factor related protein 5	-	-	-	2	Bt.12216.1.S1_at	transmembrane receptor
NDRG2	NDRG family member 2	-	-	-	2	Bt.2905.1.S1_at	other
RHOJ	ras homolog gene family, member J	-	-	-	2	Bt.28269.1.S1_at	enzyme
FLNB	filamin B, beta (actin binding protein 278)	-	-	-	2	Bt.18625.1.A1_at	other
STRAP	serine/threonine kinase receptor associated protein	-	-	-	-2	Bt.5754.2.S1_at	other
POGK	pogo transposable element with KRAB domain	-	-	-	-2	Bt.17097.1.S1_at	other
<b>CDH1</b>	cadherin 1, type 1, E-cadherin (epithelial)	-	-	-	-2	Bt.13021.1.S1_at	other
RAB25	RAB25, member RAS oncogene family	-	-	-	-2	Bt.20180.1.S1_at	enzyme
AP2B1	adaptor-related protein complex 2, beta 1 subunit	-	-	-	-2	Bt.13163.1.S1_at	transporter
<b>TOMM40</b>	translocase of outer mitochondrial membrane 40 homolog (yeast)	-	-	-	-2	Bt.1523.1.S1_at	ion channel
HNRNPA0	heterogeneous nuclear ribonucleoprotein A0	-	-	-2	-2	Bt.5216.1.S1_at	other
CPNE2	copine II	-	-	-	-2	Bt.8180.2.S1_at	other
PDSS1	prenyl (decaprenyl) diphosphate synthase, subunit 1	-	-	-2	-2	Bt.22306.1.S1_at	enzyme
TMC6	transmembrane channel-like 6	-	-	-	-2	Bt.9351.3.S1_a_at	transporter
KRT13	keratin 13	-	-	-	-2	Bt.9745.1.A1_at	other
<b>AKT1</b>	v-akt murine thymoma viral oncogene homolog 1	-	-	-	-2	Bt.4843.1.S1_at	kinase
SF4	splicing factor 4	-	-	-	-2	Bt.919.2.S1_at	other
MYBL2	v-myb myeloblastosis viral oncogene homolog (avian)-like 2	-	-	-	-2	Bt.26890.1.S1_at	transcription regulator
VARS2	valyl-tRNA synthetase 2, mitochondrial (putative)	-	-	-	-2	Bt.11270.2.S1_at	enzyme
TRMT1	TRM1 tRNA methyltransferase 1 homolog (S. cerevisiae)	-	-	-	-2	Bt.9055.2.S1_a_at	enzyme
SLC25A15	solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 15	-	-	-	-2	Bt.20227.1.S1_at	transporter
CKAP2	cytoskeleton associated protein 2	-	-	-2	-2	Bt.16065.2.A1_at	other
AP2A1	adaptor-related protein complex 2, alpha 1 subunit	-	-	-	-2	Bt.26544.2.S1_at	transporter
TBCE	tubulin folding cofactor E	-	-	-	-2	Bt.3254.2.S1_at	other
PRODH	proline dehydrogenase (oxidase) 1	-	-	-	-2	Bt.20369.1.S1_at	enzyme
HNRNPL	heterogeneous nuclear ribonucleoprotein L	-	-	-	-2	Bt.21801.2.S1_at	other
MMGT1	membrane magnesium transporter 1	-	-	-	-2	Bt.14107.2.S1_at	other
SDAD1	SDA1 domain containing 1	-	-	-	-2	Bt.19687.1.A1_at	other
EEF1E1	eukaryotic translation elongation factor 1 epsilon 1	-	-	-	-2	Bt.7633.1.S1_at	translation regulator
SFRS1	splicing factor, arginine/serine-rich 1	-	-	-	-2	Bt.864.2.S1_a_at	other
SNX10	sorting nexin 10	-	-	-2	-2	Bt.27822.2.S1_at	transporter
PTBP1	polypyrimidine tract binding protein 1	-	-	-	-2	Bt.9031.1.S1_at	enzyme
ETV4	ets variant 4	-	-	-	-2	Bt.3533.1.S1_at	transcription regulator
MAPK1	mitogen-activated protein kinase 1	-	-	-	-2	Bt.167.1.S1_at	kinase
BCS1L	BCS1-like (yeast)	-	-	-	-2	Bt.5278.2.S1_at	other
SFN	stratifin	-	-	-	-2	Bt.9957.2.S1_at	other
TUBA4A	tubulin, alpha 4a	-	-	-	-2	Bt.5183.2.S1_at	other
CCNY	cyclin Y	-	-	-	-2	Bt.11154.2.S1_at	other
RASL12	RAS-like, family 12	-	-	-	-2	Bt.16808.2.A1_at	enzyme

FRMD3	FERM domain containing 3	-	-	-2	-2	Bt.26688.2.S1_a_at	other
ASF1B	ASF1 anti-silencing function 1 homolog B (S. cerevisiae)	-	-	-2	-2	Bt.23658.2.S1_at	other
CENPM	centromere protein M	-	-	-	-2	Bt.27805.2.S1_a_at	other
ARHGAP19	Rho GTPase activating protein 19	-	-	-2	-2	Bt.26071.1.A1_at	other
FLOT2	flotillin 2	-	-	-	-2	Bt.25720.1.S1_at	other
DNASE1L1	deoxyribonuclease I-like 1	-	-	-	-2	Bt.28559.1.S1_a_at	enzyme
SLC44A4	chromosome 6 open reading frame 108	-	-	-	-2	Bt.6162.1.S1_at	other
NOP2	NOP2 nucleolar protein homolog (yeast)	-	-	-	-2	Bt.1040.3.S1_at	other
MYO1B	myosin IB	-	-	-	-2	Bt.16836.1.S1_at	other
ORC1L	origin recognition complex, subunit 1-like (yeast)	-	-	-	-2	Bt.2111.1.S1_a_at	other
SLC7A5	solute carrier family 7 (cationic amino acid transporter, y+ system), member 5	-	-	-	-2	Bt.5528.1.S1_at	transporter
WDR46	WD repeat domain 46	-	-	-2	-2	Bt.4534.2.S1_at	enzyme
MARS	methionyl-tRNA synthetase	-	-	-	-2	Bt.9306.3.S1_at	enzyme
GYPC	glycophorin C (Gerbich blood group)	-	-	-2	-2	Bt.11221.1.S1_at	other
PPP5C	protein phosphatase 5, catalytic subunit	-	-	-2	-3	Bt.23237.1.S1_at	phosphatase
H1F0	H1 histone family, member 0	-	-	-2	-3	Bt.24209.1.S1_at	other
BUB1	budding uninhibited by benzimidazoles 1 homolog (yeast)	-	-	-	-3	Bt.21513.2.S1_at	kinase
AP3S2	adaptor-related protein complex 3, sigma 2 subunit	-	-	-	-3	Bt.8933.2.S1_at	transporter
CARS	cysteinyl-tRNA synthetase	-	-	-2	-3	Bt.18835.2.S1_at	enzyme
SRM	spermidine synthase	-	-	-	-3	Bt.9078.2.S1_a_at	enzyme
PSAT1	phosphoserine aminotransferase 1	-	-	-	-3	Bt.13588.3.A1_at	enzyme
SLC7A11	solute carrier family 7, (cationic amino acid transporter, y+ system) member 11	-	-	-	-3	Bt.2849.1.S1_at	transporter
GPD1L	glycerol-3-phosphate dehydrogenase 1-like	-	-2	-3	-3	Bt.17341.1.S1_at	enzyme
SLC1A4	solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	-	-	-	-3	Bt.13712.1.S1_at	transporter
<b>RNASE6</b>	ribonuclease, RNase A family, k6	-	-	-3	-3	Bt.287.1.S1_at	enzyme
LIG1	ligase I, DNA, ATP-dependent	-	-	-3	-3	Bt.12876.3.S1_a_at	enzyme
DIRAS3	DIRAS family, GTP-binding RAS-like 3	-	-	-3	-3	Bt.12283.1.A1_at	enzyme
BRCA1	breast cancer 1, early onset	-	-	-2	-3	Bt.22878.2.S1_a_at	transcription regulator
DTNB	dystrobrevin, beta	-	-	-	-3	Bt.7860.2.S1_a_at	other

\* - means not significant regulated

\*\* bold letters means IPA functional category "Inflammatory Response"

**Table S4B: Human ortholog genes eligible for IPA, with maximal regulation at indicated time points**

**B) Genes regulated in *S. aureus* stimulated pbMEC**

Symbol	Entrez Gene Name	fold change				Bovine Affy.-ID	Type (IPA)
		1 h	3 h	6 h	24 h		
<b>Maximum regulated 1 h after stimulation</b>							
CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1	25	18	-	-	Bt.16058.2.S1_at	enzyme
MAP3K8	mitogen-activated protein kinase kinase kinase 8	6	4	3	3	Bt.28561.1.S1_at	kinase
SIK1	salt-inducible kinase 1	4	-	-	-	Bt.21518.1.S1_at	kinase
TIPARP	TCDD-inducible poly polymerase	4	2	-	-	Bt.23611.2.S1_at	other
NR4A2	nuclear receptor subfamily 4, group A, member 2	4	-	-	-	Bt.10060.1.S1_at	ligand-dependent nuclear receptor
DLX2	distal-less homeobox 2	3	-	-	-	Bt.13363.1.A1_at	transcription regulator
<b>PDE4B</b>	phosphodiesterase 4B, cAMP-specific	2	-	-	-	Bt.20286.1.S1_at	enzyme
NR4A1	nuclear receptor subfamily 4, group A, member 1	2	-	-	-	Bt.23373.1.S1_at	ligand-dependent nuclear receptor
<b>IER3</b>	immediate early response 3	2	-	-	-	Bt.2153.1.S1_at	other
FOXQ1	forkhead box Q1	2	-	-	-	Bt.15658.1.S1_at	transcription regulator
GEM	GTP binding protein overexpressed in skeletal muscle	2	-	-	-	Bt.28062.1.S1_at	enzyme
DKK1	dickkopf homolog 1 ( <i>Xenopus laevis</i> )	-2	-	-	-	Bt.13880.1.S1_at	growth factor
ADAMTS1	ADAM metalloproteinase with thrombospondin type 1 motif, 1	-3	-	-	-	Bt.12010.2.S1_at	peptidase
<b>Maximum regulated 3 h after stimulation</b>							
CYP1A1	cytochrome P450, family 1, subfamily A, polypeptide 1	75	391	95	-	Bt.13772.1.A1_at	enzyme
<b>CXCL2</b>	chemokine (C-X-C motif) ligand 2	4	24	13	16	Bt.610.1.A1_at	cytokine
<b>CXCL1</b>	chemokine (C-X-C motif) ligand 1	3	17	7	13	Bt.611.1.S1_x_at	cytokine
<b>IL8</b>	interleukin 8	-	5	4	4	Bt.155.1.S1_at	cytokine
NAV3	neuron navigator 3	-	3	-	-	Bt.25031.1.S1_at	other
<b>TNFAIP3</b>	tumor necrosis factor, alpha-induced protein 3	-	3	2	3	Bt.17514.1.S1_at	other
<b>NFKBIZ</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta	-	3	2	2	Bt.8227.1.S1_at	transcription regulator
MYRIP	myosin VIIA and Rab interacting protein	-	3	2	-	Bt.26660.1.S1_at	other
<b>CXCL3</b>	chemokine (C-X-C motif) ligand 3	-	3	2	2	Bt.23093.1.S1_at	cytokine
NR4A3	nuclear receptor subfamily 4, group A, member 3	2	2	-	-	Bt.17173.1.A1_at	ligand-dependent nuclear receptor
BMF	Bcl2 modifying factor	-	2	-	-	Bt.20027.1.S1_at	other
ANGPTL4	angiotensin-like 4	-	2	-	-	Bt.4816.1.S1_at	other
RNF144B	ring finger protein 144B	-	2	-	-	Bt.6796.1.A1_at	enzyme
RARB	retinoic acid receptor, beta	-	2	-	-	Bt.21044.1.A1_at	ligand-dependent nuclear receptor
<b>Maximum regulated 6 h after stimulation</b>							
<b>CXCL6</b>	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	-	5	7	6	Bt.7165.1.S1_at	cytokine
PPP1R3C	protein phosphatase 1, regulatory (inhibitor) subunit 3C	-	2	5	5	Bt.13484.1.A1_at	phosphatase
<b>SLC2A3</b>	solute carrier family 2, member 3	-	-	4	4	Bt.3964.1.S1_at	transporter
STC1	stanniocalcin 1	-	-	3	-	Bt.10272.1.S1_at	kinase
SLC7A11	solute carrier family 7, (cationic amino acid transporter, y+ system) member 11	-	-	2	-	Bt.2849.1.S1_at	transporter
<b>CD38</b>	CD38 antigen	-	-	2	-	Bt.27365.1.A1_at	enzyme
ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1	-	2	2	-	Bt.29740.1.S1_at	transporter
IGFBP5	insulin-like growth factor binding protein 5	-	-	-2	-	Bt.21465.1.S1_at	other
<b>SERPING1</b>	serpin peptidase inhibitor, clade G (C1 inhibitor), member 1	-	-	-2	-	Bt.22969.1.S1_a_at	other

APC	adenomatous polyposis coli	-	-	-2	-	Bt.19631.1.A1_at	enzyme
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**Maximum regulated 24 h after stimulation**

<b>SAA3</b>	serum amyloid A3	-	2	6	37	Bt.278.1.S1_at	other
<b>CCL5</b>	chemokine (C-C motif) ligand 5	-	-	-	31	Bt.552.1.S1_at	cytokine
<b>HP</b>	haptoglobin	-	-	3	22	Bt.12553.1.S1_at	peptidase
<b>MX2</b>	myxovirus (influenza virus) resistance 2 (mouse)	-	-	-	19	Bt.8143.1.S1_at	enzyme
RTP4	receptor (chemosensory) transporter protein 4	-	-	-	15	Bt.24813.2.S1_at	other
IFIT2	interferon-induced protein with tetratricopeptide repeats 2	-	-	-	10	Bt.24795.1.A1_at	other
RSAD2	radical S-adenosyl methionine domain containing 2	-	-	-	10	Bt.24467.1.S1_at	enzyme
SLC27A1	solute carrier family 27 (fatty acid transporter), member 1	-	-	-	8	Bt.15788.3.S1_at	transporter
<b>IFI44</b>	interferon-induced protein 44	-	-	-	7	Bt.20785.1.A1_at	other
PLAC8	placenta-specific 8	-	-	-	7	Bt.15912.1.S1_at	other
<b>MX1</b>	myxovirus (influenza virus) resistance 1	-	-	-	6	Bt.4675.1.S1_a_at	enzyme
EIF4E	eukaryotic translation initiation factor 4E	-	-	-	6	Bt.17195.1.A1_at	translation regulator
<b>GBP2</b>	guanylate binding protein 2, interferon-inducible	-	-	-	5	Bt.25303.1.A1_at	enzyme
<b>IL18BP</b>	interleukin 18 binding protein	-	-	-	5	Bt.22116.1.A1_at	other
<b>IFI44L</b>	interferon-induced protein 44-like	-	-	-	5	Bt.25111.1.A1_at	other
<b>OAS1</b>	2',5'-oligoadenylate synthetase 1, 40/46kDa	-	-	-	5	Bt.20891.1.S1_at	enzyme
RNF213	ring finger protein 213	-	-	-	4	Bt.9179.1.A1_at	other
<b>CCL2</b>	chemokine (C-C motif) ligand 2	-	3	3	4	Bt.2408.1.S1_s_at	cytokine
<b>IFI6</b>	interferon, alpha-inducible protein 6	-	-	-	4	Bt.8436.1.S1_at	other
<b>IFIH1</b>	interferon induced with helicase C domain 1	-	-	-	4	Bt.16857.1.A1_at	enzyme
USP18	ubiquitin specific peptidase 18	-	-	-	4	Bt.23233.2.S1_at	peptidase
RND1	Rho family GTPase 1	-	4	3	4	Bt.3774.1.A1_at	enzyme
SP100	SP100 nuclear antigen	-	-	-	4	Bt.21851.1.A1_at	transcription regulator
<b>LTF</b>	lactotransferrin	-	3	2	4	Bt.7780.1.S1_at	peptidase
<b>ISG20</b>	interferon stimulated exonuclease gene 20kDa	-	-	-	4	Bt.22275.1.A1_at	enzyme
<b>LGALS9</b>	lectin, galactoside-binding, soluble, 9	-	-	-	4	Bt.8906.1.S1_at	other
<b>DDX58</b>	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	-	-	-	4	Bt.24033.1.A1_at	enzyme
<b>IL6</b>	interleukin 6 (interferon, beta 2)	-	3	3	4	Bt.3686.1.S1_at	cytokine
<b>NOS2</b>	nitric oxide synthase 2, inducible	-	-	-	3	Bt.8479.1.A1_at	enzyme
<b>NFKBIA</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	-	2	-	3	Bt.9027.1.S1_at	other
<b>CCL20</b>	chemokine ligand 20	-	2	2	3	Bt.9560.1.S1_at	cytokine
UBA7	ubiquitin-like modifier activating enzyme 7	-	-	-	3	Bt.2294.1.S1_a_at	enzyme
CADPS	Ca <sup>++</sup> -dependent secretion activator	-	-	-	3	Bt.16070.1.S1_at	other
GBP3	guanylate binding protein 3	-	-	-	3	Bt.9296.1.A1_at	enzyme
<b>ISG15</b>	ISG15 ubiquitin-like modifier	-	-	-	3	Bt.12304.1.S1_at	other
<b>MUC1</b>	mucin 1, transmembrane	-	-	-	3	Bt.9561.1.S1_at	other
<b>EIF2AK2</b>	eukaryotic translation initiation factor 2-alpha kinase 2	-	-	-	3	Bt.20923.1.S1_at	kinase
IFI16	interferon, gamma-inducible protein 16	-	-	-	3	Bt.22021.1.S1_at	transcription regulator
XAF1	XIAP associated factor 1	-	-	-	3	Bt.5259.1.S1_at	other
GBP4	guanylate binding protein 4	-	-	-	3	Bt.28744.1.S1_at	enzyme
UBD	ubiquitin D	-	-	-	2	Bt.5897.2.S1_at	other
<b>HIF1A</b>	hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)	-	-	2	2	Bt.25110.1.A1_at	transcription regulator
<b>NFKB2</b>	nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)	-	-	2	2	Bt.20288.1.S1_at	transcription regulator
TGM3	transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase)	-	-	2	2	Bt.13628.1.S1_at	enzyme
EGLN3	egl nine homolog 3 (C. elegans)	-	-	-	2	Bt.23232.1.S1_at	enzyme
DTX3L	deltex 3-like (Drosophila)	-	-	-	2	Bt.28523.1.S1_at	other
LGALS3BP	lectin, galactoside-binding, soluble, 3 binding protein	-	-	-	2	Bt.6597.2.S1_a_at	transmembrane receptor

SMN2	survival of motor neuron 2, centromeric	-	-	-	2	Bt.15979.1.S1_at	other
<b>SP140</b>	SP140 nuclear body protein	-	-	-	2	Bt.27830.1.A1_at	transcription regulator
IFIT5	interferon-induced protein with tetratricopeptide repeats 5	-	-	-	2	Bt.22130.1.S1_at	other
PNPT1	polyribonucleotide nucleotidyltransferase 1	-	-	-	2	Bt.5684.1.S1_at	enzyme
FAM14A	family with sequence similarity 14, member A	-	-	-	2	Bt.9779.1.S1_at	other
PARP9	poly (ADP-ribose) polymerase family, member 9	-	-	-	2	Bt.20409.1.S1_at	other
<b>TNFSF13b</b>	tumor necrosis factor (ligand) superfamily, member 13b	-	-	-	2	Bt.24855.2.S1_at	cytokine
MXI1	MAX interactor 1	-	-	2	2	Bt.20431.2.S1_at	transcription regulator
TRIM5	tripartite motif-containing 5	-	-	-	2	Bt.16983.1.S1_at	other
<b>IRF7</b>	interferon regulatory factor 7	-	-	-	2	Bt.5768.1.S1_at	transcription regulator
<b>SOD2</b>	superoxide dismutase 2, mitochondrial	-	-	-	2	Bt.2501.2.A1_at	enzyme
<b>TLR2</b>	toll-like receptor 2	-	-	-	2	Bt.8945.1.S1_at	transmembrane receptor
CASP7	caspase 7, apoptosis-related cysteine peptidase	-	-	-	2	Bt.28094.1.S1_at	peptidase
<b>IKBKE</b>	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon	-	-	-	2	Bt.1472.1.S1_at	kinase
HSD3B1	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1	-	-	-	2	Bt.4760.1.S1_at	enzyme
PFKFB3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3	-	-	2	2	Bt.12314.1.S1_at	kinase
BTC	betacellulin	-	-	-	2	Bt.236.1.S1_at	growth factor
COIL	coilin	-	-	-	2	Bt.9075.1.S1_at	other
GBP5	guanylate binding protein 5	-	-	-	2	Bt.21773.2.S1_at	enzyme
<b>TAP1</b>	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	-	-	-	2	Bt.20416.1.S1_at	transporter
<b>CD40</b>	CD40 molecule, TNF receptor superfamily member 5	-	-	-	2	Bt.13130.1.S1_at	transmembrane receptor
SAMD9	sterile alpha motif domain containing 9	-	-	-	2	Bt.28624.1.S1_at	other
<b>VEGFA</b>	vascular endothelial growth factor A	-	-	-	2	Bt.4138.1.S1_a_at	growth factor
<b>SLPI</b>	secretory leukocyte protease inhibitor	-	-	-	2	Bt.15484.2.A1_at	other
<b>CENPF</b>	centromere protein F, 350/400ka (mitosin)	-	-	-	-2	Bt.27668.1.A1_at	other
ISM1	isthmin 1 homolog (zebrafish)	-	-	-	-2	Bt.19183.1.A1_at	other
DZIP3	DAZ interacting protein 3, zinc finger	-	-	-	-2	Bt.19781.1.A1_at	enzyme
PQBP1	polyglutamine binding protein 1	-	-	-	-2	Bt.22125.2.A1_at	transcription regulator
ELSPBP1	epididymal sperm binding protein 1	-	-	-	-2	Bt.224.1.S1_at	other
<b>EDNRA</b>	endothelin receptor type A	-	-	-	-2	Bt.4719.1.S1_at	transmembrane receptor
DYNC2H1	dynein, cytoplasmic 2, heavy chain 1	-	-	-	-2	Bt.24983.1.A1_at	other
<b>CFTR</b>	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7)	-	-	-	-2	Bt.19505.1.A1_at	ion channel
PDGFRA	platelet-derived growth factor receptor, alpha polypeptide	-	-	-	-2	Bt.9423.1.S1_at	kinase
TCF7L1	transcription factor 7-like 1 (T-cell specific, HMG-box)	-	-	-	-2	Bt.17343.1.S1_at	transcription regulator
ACSM1	acyl-CoA synthetase medium-chain family member 1	-	-	-2	-2	Bt.4604.1.S1_a_at	enzyme
MMGT1	membrane magnesium transporter 1	-	-	-	-2	Bt.14107.2.S1_at	other
REV3L	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)	-	-	-	-2	Bt.25319.2.S1_at	enzyme
ARSK	arylsulfatase family, member K	-	-	-	-2	Bt.16276.1.A1_at	enzyme
RBP1	retinol binding protein 1, cellular	-	-	-	-2	Bt.17810.1.S1_a_at	transporter
SLC16A4	solute carrier family 16, member 4 (monocarboxylic acid transporter 5)	-	-	-	-2	Bt.22085.1.S1_at	transporter
<b>MYH11</b>	myosin, heavy chain 11, smooth muscle	-	-	-	-2	Bt.12685.1.S1_at	other
FRMD3	FERM domain containing 3	-	-	-	-2	Bt.17702.1.A1_at	other
CDH2	cadherin 2, type 1, N-cadherin (neuronal)	-	-	-	-2	Bt.4417.1.S1_at	other
TSPAN12	tetraspanin 12	-	-	-	-2	Bt.29152.1.S1_at	other
PDGFD	platelet derived growth factor D	-	-	-	-2	Bt.20743.1.A1_at	growth factor
GRIA3	glutamate receptor, ionotropic, AMPA 3	-	-	-	-2	Bt.3178.1.A1_at	ion channel
EMCN	endomucin	-	-	-	-2	Bt.5003.1.S1_at	other
<b>CALCRL</b>	calcitonin receptor-like	-	-	-	-2	Bt.14578.1.A1_at	G-protein coupled receptor
COL15A1	collagen, type XV, alpha 1	-	-	-	-2	Bt.20512.1.S1_at	other
DIRAS3	DIRAS family, GTP-binding RAS-like 3	-	-	-	-3	Bt.12283.1.A1_at	enzyme
<b>SERPINF1</b>	serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1	-	-	-	-3	Bt.2638.1.S1_at	other
TCF4	transcription factor 4	-	-	-	-3	Bt.5682.1.S1_at	transcription regulator

ARL15	ADP-ribosylation factor-like 15	-	-	<b>-2</b>	<b>-3</b>	Bt.17024.1.A1_at	other
<u>IQGAP2</u>	<u>IQ motif containing GTPase activating protein 2</u>	-	-	-	<b>-3</b>	Bt.20947.1.S1_at	other

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\* - means not significant regulated

\*\* bold letters means IPA functional category "Inflammatory Response"