

Figure S1. RNA quality control report. Neutrophils were stimulated with 1 $\mu\text{g/ml}$ LTA. The quality of each sample was examined via the RIN software. The RIN for (A) the Veh group and (B) the LTA group was 7.6 and 8.3, respectively. LTA, lipoteichoic acid; RIN, RNA integrity number; Veh, vehicle.

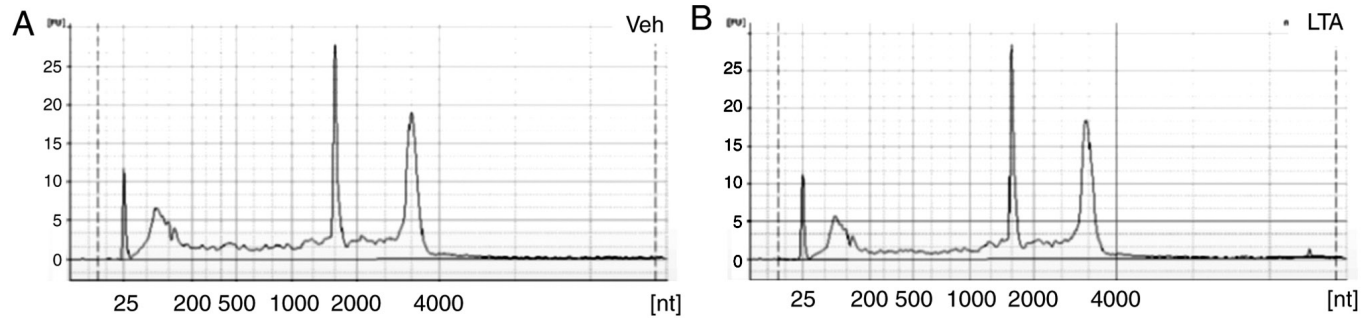


Figure S2. RNA sequencing quality control report. The left panel shows per-base sequence quality and the right panel shows per-sequence quality scores for (A) LTA-stimulated cells and (B) vehicle-treated cells. The quality score from 15-99 bp was considered high (green background). The majority read >35 indicated good sequencing quality. LTA, lipoteichoic acid.

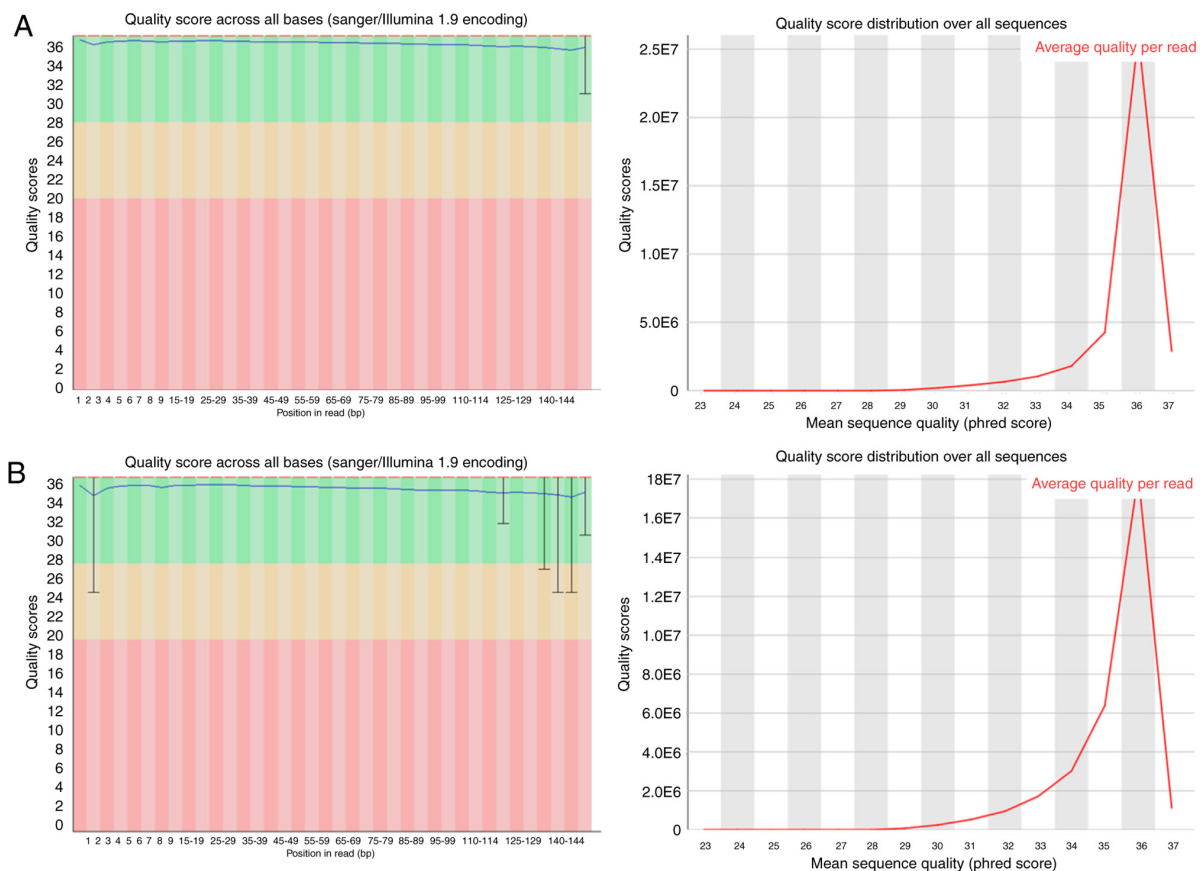


Figure S3. Small RNA sequencing quality control report. The left panel shows per-base sequence quality, and the right panel shows the per-sequence quality scores for (A) LTA-stimulated cells and (B) vehicle-treated cells. The quality score across all bases was considered good (green background). The majority read >35 indicated good sequencing quality. LTA, lipoteichoic acid.

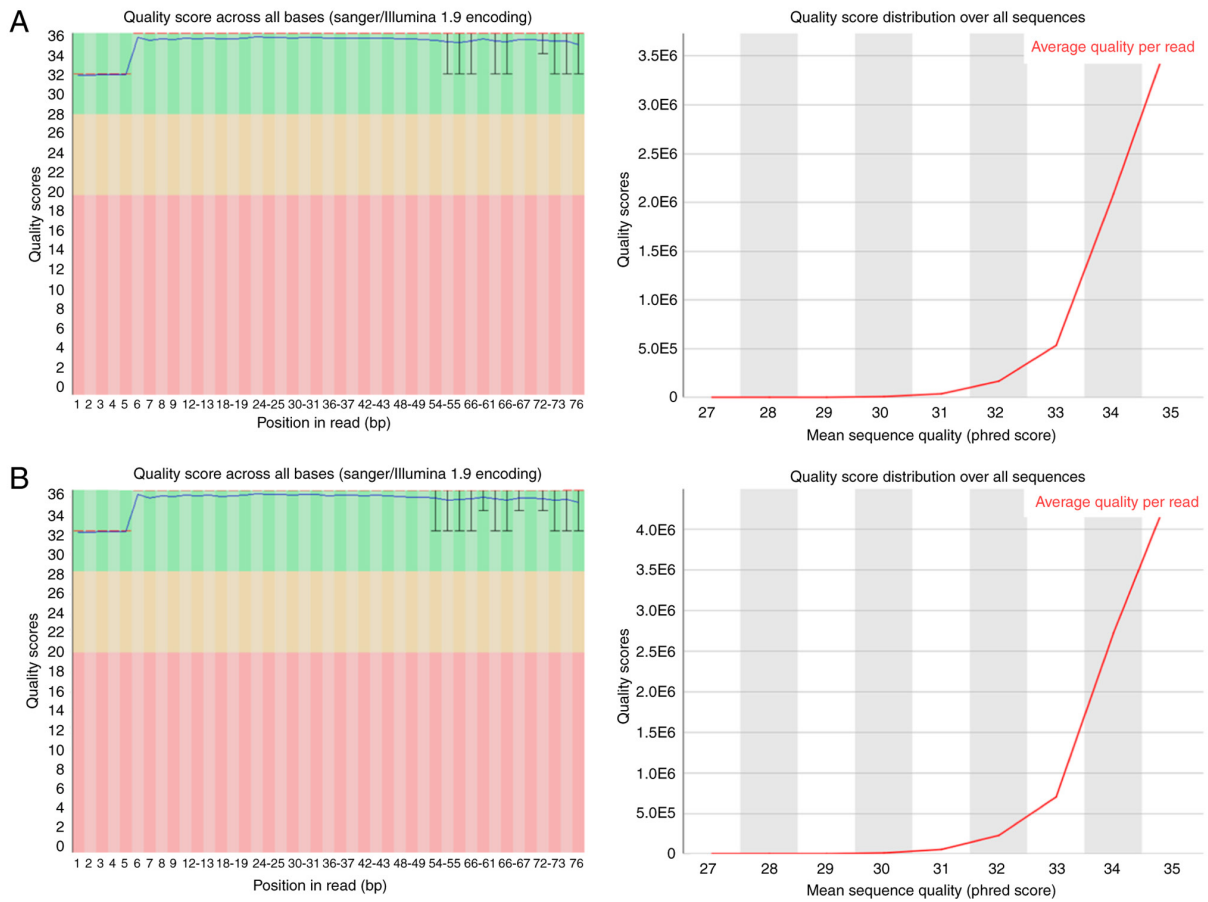


Table SI. RNA and small RNA sequencing summary.

A, RNA sequencing

Group	Total reads number	Trimmed read number
LTA	78,219,068	75,223,530
Veh	67,615,948	64,735,118

B, Small RNA sequencing

Group	Total reads number	Trimmed read number
LTA	9,252,412	6,582,765
Veh	11,807,744	8,214,190

Table SII. List of 290 significant differentially expressed genes.

	Gene symbol	Gene description
1	FAM214B	Family with sequence similarity 214 member B
2	ALDH3B1	Aldehyde dehydrogenase 3 family member B1
3	PLAUR	Plasminogen activator, urokinase receptor
4	TYROBP	TYRO protein tyrosine kinase binding protein
5	ALOX5	Arachidonate 5-lipoxygenase
6	SLC11A1	Solute carrier family 11 member 1
7	RNH1	Ribonuclease/angiogenin inhibitor 1
8	NDUFS1	NADH:ubiquinone oxidoreductase core subunit S1
9	ATP6V0A1	ATPase H ⁺ transporting V0 subunit a1
10	APBA2	Amyloid beta precursor protein binding family A member 2
11	TIMP2	TIMP metalloproteinase inhibitor 2
12	VCAN	Versican
13	CAPG	Capping actin protein, gelsolin like
14	DKK3	Dickkopf WNT signaling pathway inhibitor 3
15	LAMC2	Laminin subunit gamma 2
16	GNA15	G protein subunit alpha 15
17	BCAT1	Branched chain amino acid transaminase 1
18	AHRR	aryl-hydrocarbon receptor repressor
19	EVI5	Ecotropic viral integration site 5
20	NDST1	N-deacetylase and N-sulfotransferase 1
21	CA12	Carbonic anhydrase 12
22	ARHGEF10L	Rho guanine nucleotide exchange factor 10 like
23	RASAL2	RAS protein activator like 2
24	BCAP29	B-cell receptor associated protein 29
25	EPB41L3	Erythrocyte membrane protein band 4.1 like 3
26	SH3BP2	SH3 domain binding protein 2
27	P2RX7	Purinergic receptor P2X 7
28	LAG3	Lymphocyte activating 3
29	LYZ	Lysozyme
30	NLRC4	NLR family CARD domain containing 4
31	NRP1	Neuropilin 1
32	LGALS1	Galectin 1
33	PDGFB	Platelet derived growth factor subunit B
34	KIAA0930	KIAA0930
35	ITPK1	Inositol-tetrakisphosphate 1-kinase
36	PAPLN	Papilin, proteoglycan like sulfated glycoprotein
37	MMP9	Matrix metalloproteinase 9
38	CD40	CD40 molecule
39	CTSZ	Cathepsin Z
40	CST3	Cystatin C
41	TLR8	Toll like receptor 8
42	FLT1	Fms related tyrosine kinase 1
43	BFAR	Bifunctional apoptosis regulator
44	BCKDK	Branched chain ketoacid dehydrogenase kinase
45	CTSH	Cathepsin H
46	CD276	CD276 molecule
47	CEMIP	Cell migration inducing hyaluronan binding protein
48	KCNN4	Potassium calcium-activated channel subfamily N member 4
49	FCGRT	Fc fragment of IgG receptor and transporter
50	LILRB1	Leukocyte immunoglobulin like receptor B1
51	HAS1	Hyaluronan synthase 1
52	TFPI2	Tissue factor pathway inhibitor 2
53	MET	MET proto-oncogene, receptor tyrosine kinase
54	CCL24	C-C motif chemokine ligand 24
55	SNX8	Sorting nexin 8
56	CEP41	Centrosomal protein 41

Table SII. Continued.

	Gene symbol	Gene description
57	ENG	Endoglin
58	RASSF4	Ras association domain family member 4
59	TBC1D12	TBC1 domain family member 12
60	P2RX1	Purinergic receptor P2X 1
61	CCL7	C-C motif chemokine ligand 7
62	CCL2	C-C motif chemokine ligand 2
63	CCL1	C-C motif chemokine ligand 1
64	ABCC3	ATP binding cassette subfamily C member 3
65	TBC1D9	TBC1 domain family member 9
66	DTX4	Deltex E3 ubiquitin ligase 4
67	SLC15A3	Solute carrier family 15 member 3
68	PPFIBP1	PPFIA binding protein 1
69	VDR	Vitamin D (1,25- dihydroxyvitamin D3) receptor
70	SASH1	SAM and SH3 domain containing 1
71	VNN2	Vanin 2
72	SLC16A10	Solute carrier family 16 member 10
73	HBEGF	Heparin binding EGF like growth factor
74	IL12B	Interleukin 12B
75	DPYSL3	Dihydropyrimidinase like 3
76	WNT5A	Wnt family member 5A
77	STEAP3	STEAP3 metalloreductase
78	CCDC88A	Coiled-coil domain containing 88A
79	KYNU	Kynureninase
80	NCF2	Neutrophil cytosolic factor 2
81	KMO	Kynurenine 3-monooxygenase
82	AKT3	AKT serine/threonine kinase 3
83	F3	Coagulation factor III, tissue factor
84	NEK6	NIMA related kinase 6 [Source:HGNC Symbol;Acc:HGNC:7749]
85	NPC2	NPC intracellular cholesterol transporter 2
86	GPR68	G protein-coupled receptor 68
87	MOB3B	MOB kinase activator 3B
88	PLXDC2	Plexin domain containing 2
89	TGFBI	Transforming growth factor beta induced
90	TNFRSF8	TNF receptor superfamily member 8
91	CD80	CD80 molecule
92	TNFSF10	TNF superfamily member 10
93	INHBA	Inhibin beta A subunit
94	NT5C3A	5'-nucleotidase, cytosolic IIIA
95	EGR2	Early growth response 2
96	LRP1	LDL receptor related protein 1
97	C3	Complement C3
98	CD93	CD93 molecule
99	IFI6	Interferon alpha inducible protein 6
100	ADGRE2	Adhesion G protein-coupled receptor E2
101	GNG11	G protein subunit gamma 11
102	ARHGAP22	Rho GTPase activating protein 22
103	SIGLEC9	Sialic acid binding Ig like lectin 9
104	ERMARD	ER membrane associated RNA degradation
105	NECTIN2	Nectin cell adhesion molecule 2
106	LILRB2	Leukocyte immunoglobulin like receptor B2
107	EMILIN2	Elastin microfibril interfacier 2
108	PTPRE	Protein tyrosine phosphatase, receptor type E
109	RIN2	Ras and Rab interactor 2
110	MYBPH	Myosin binding protein H
111	PRAM1	PML-RARA regulated adaptor molecule 1
112	ADAMDEC1	ADAM like decysin 1

Table SII. Continued.

	Gene symbol	Gene description
113	MRPS36	Mitochondrial ribosomal protein S36
114	RSAD2	Radical S-adenosyl methionine domain containing 2
115	EMP1	Epithelial membrane protein 1
116	SOX5	SRY-box 5
117	CYP2J2	Cytochrome P450 family 2 subfamily J member 2
118	ESPL1	Extra spindle pole bodies like 1, separase
119	NPL	N-acetylneuraminase pyruvate lyase
120	TTLL4	Tubulin tyrosine ligase like 4
121	CYP27A1	Cytochrome P450 family 27 subfamily A member 1
122	CKAP4	Cytoskeleton associated protein 4
123	TNS3	Tensin 3
124	GNPMB	Glycoprotein nmb
125	TTYH3	Tweety family member 3
126	FAM129B	Family with sequence similarity 129 member B
127	IER3	Immediate early response 3
128	TLR2	Toll like receptor 2
129	MMP7	Matrix metalloproteinase 7
130	THBS1	Thrombospondin 1
131	IFI44L	Interferon induced protein 44 like
132	IFI44	Interferon induced protein 44
133	CYP1B1	Cytochrome P450 family 1 subfamily B member 1
134	EMILIN1	Elastin microfibril interfacer 1
135	MYOF	Myoferlin
136	HERC5	HECT and RLD domain containing E3 ubiquitin protein ligase 5
137	FGF2	Fibroblast growth factor 2
138	FAM60A	Family with sequence similarity 60 member A
139	GAS2L3	Growth arrest specific 2 like 3
140	GALNT6	Polypeptide N-acetylgalactosaminyltransferase 6
141	RTN1	Reticulon 1
142	ARRDC4	Arrestin domain containing 4
143	ITGAX	Integrin subunit alpha X
144	IFITM3	Interferon induced transmembrane protein 3
145	RCN3	Reticulocalbin 3
146	XCL2	X-C motif chemokine ligand 2
147	RGL1	Ral guanine nucleotide dissociation stimulator like 1
148	NCEH1	Neutral cholesterol ester hydrolase 1
149	LPP	LIM domain containing preferred translocation partner in lipoma
150	PDGFC	Platelet derived growth factor C
151	LHFPL2	Lipoma HMGIC fusion partner-like 2
152	PLA2G7	Phospholipase A2 group VII
153	DOK3	Docking protein 3
154	ARHGAP18	Rho GTPase activating protein 18
155	GBGT1	Globoside alpha-1,3-N-acetylgalactosaminyltransferase 1 (FORS blood group)
156	ANKRD1	Ankyrin repeat domain 1
157	SOGA1	Suppressor of glucose, autophagy associated 1
158	FAM124A	Family with sequence similarity 124 member A
159	HNMT	Histamine N-methyltransferase
160	CRIM1	Cysteine rich transmembrane BMP regulator 1
161	SLC7A11	Solute carrier family 7 member 11
162	TMEM45B	Transmembrane protein 45B
163	GLT1D1	Glycosyltransferase 1 domain containing 1
164	RASGRP3	RAS guanyl releasing protein 3
165	DAB2	DAB2, clathrin adaptor protein
166	PID1	Phosphotyrosine interaction domain containing 1
167	CXCL13	C-X-C motif chemokine ligand 13
168	MAP3K7CL	MAP3K7 C-terminal like

Table SII. Continued.

	Gene symbol	Gene description
169	CD109	CD109 molecule
170	MMP14	Matrix metalloproteinase 14
171	FAM213B	Family with sequence similarity 213 member B
172	FANCC	Fanconi anemia complementation group C
173	MRAS	Muscle RAS oncogene homolog
174	SLAMF8	SLAM family member 8
175	ABR	Active BCR-related
176	PTGIR	Prostaglandin I2 (prostacyclin) receptor (IP)
177	HK3	Hexokinase 3
178	FBXL13	F-box and leucine rich repeat protein 13
179	AK4	Adenylate kinase 4
180	PDPN	Podoplanin
181	NEXN	Nexilin F-actin binding protein
182	ATF3	Activating transcription factor 3
183	SLC22A15	Solute carrier family 22 member 15
184	RBM47	RNA binding motif protein 47
185	CXCL3	C-X-C motif chemokine ligand 3
186	CXCL5	C-X-C motif chemokine ligand 5
187	PPBP	Pro-platelet basic protein
188	CDCP1	CUB domain containing protein 1
189	TLR3	Toll like receptor 3
190	CSF2	Colony stimulating factor 2
191	CTSB	Cathepsin B
192	ABCA1	ATP binding cassette subfamily A member 1
193	FBP1	Fructose-bisphosphatase 1
194	CYBB	Cytochrome b-245 beta chain
195	ARHGEF40	Rho guanine nucleotide exchange factor 40
196	ANPEP	Alanyl aminopeptidase, membrane
197	MS4A7	Membrane spanning 4-domains A7
198	MS4A14	Membrane spanning 4-domains A14
199	CACNB3	Calcium voltage-gated channel auxiliary subunit beta 3
200	LENG8	Leukocyte receptor cluster member 8
201	SEMA6B	Semaphorin 6B
202	VPS37C	VPS37C, ESCRT-I subunit
203	RAB31	RAB31, member RAS oncogene family
204	ADAM9	ADAM metalloproteinase domain 9
205	FAM84B	Family with sequence similarity 84 member B
206	PXDC1	PX domain containing 1
207	MN1	MN1 proto-oncogene, transcriptional regulator
208	CXCL10	C-X-C motif chemokine ligand 10
209	SDC2	Syndecan 2
210	MT1E	Metallothionein 1E
211	REPS2	RALBP1 associated Eps domain containing 2
212	CD14	CD14 molecule
213	CEACAM3	Carcinoembryonic antigen related cell adhesion molecule 3
214	GAA	Glucosidase alpha, acid
215	P2RY6	Pyrimidinergic receptor P2Y6
216	TMEM51	Transmembrane protein 51
217	CLEC12A	C-type lectin domain family 12 member A
218	ARNT2	Aryl hydrocarbon receptor nuclear translocator 2
219	SMPDL3A	Sphingomyelin phosphodiesterase acid like 3A
220	CCL19	C-C motif chemokine ligand 19
221	HPSE	Heparanase
222	C1QB	Complement C1q B chain
223	OLR1	Oxidized low density lipoprotein receptor 1
224	C1QTNF1	C1q and TNF related 1

Table SII. Continued.

	Gene symbol	Gene description
225	SH3PXD2B	SH3 and PX domains 2B
226	CHST2	Carbohydrate sulfotransferase 2
227	LRRC25	Leucine rich repeat containing 25
228	UCP2	Uncoupling protein 2
229	MSRA	Methionine sulfoxide reductase A
230	TUBB6	Tubulin beta 6 class V
231	JAKMIP2	Janus kinase and microtubule interacting protein 2
232	RUFY1	RUN and FYVE domain containing 1
233	METRNL	Meteorin like, glial cell differentiation regulator
234	B3GNT8	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 8
235	TOP3A	Topoisomerase (DNA) III alpha
236	CD163	CD163 molecule
237	FAM20C	FAM20C, golgi associated secretory pathway kinase
238	KCTD12	Potassium channel tetramerization domain containing 12
239	THBD	Thrombomodulin
240	LDLRAD3	Low density lipoprotein receptor class A domain containing 3
241	RAB39A	RAB39A, member RAS oncogene family
242	LACC1	Laccase domain containing 1
243	TMEM150B	Transmembrane protein 150B
244	HIST1H2BC	Histone cluster 1 H2B family member c
245	MB21D2	Mab-21 domain containing 2
246	ZNF707	Zinc finger protein 707
247	TNFSF15	TNF superfamily member 15
248	CHST15	Carbohydrate sulfotransferase 15
249	CSF1R	Colony stimulating factor 1 receptor
250	MCEMP1	Mast cell expressed membrane protein 1
251	ADAP2	ArfGAP with dual PH domains 2
252	PRR16	Proline rich 16
253	USP18	Ubiquitin specific peptidase 18
254	IL3RA	Interleukin 3 receptor subunit alpha
255	RASA3	RAS p21 protein activator 3
256	RXRA	Retinoid X receptor alpha
257	CD300E	CD300e molecule
258	SEPT10	Septin 10
259	TNFRSF4	TNF receptor superfamily member 4
260	MITF	Melanogenesis associated transcription factor
261	SHTN1	Shootin 1
262	GPR89B	G protein-coupled receptor 89B
263	H1FO	H1 histone family member 0
264	PLXNB2	Plexin B2
265	DAPK1	Death associated protein kinase 1
266	ADA	Adenosine deaminase
267	SRC	SRC proto-oncogene, non-receptor tyrosine kinase
268	C5AR1	Complement C5a receptor 1
269	PDGFA	Platelet derived growth factor subunit A
270	MPEG1	Macrophage expressed 1
271	CFAP43	Cilia and flagella associated protein 43
272	C1orf122	Chromosome 1 open reading frame 122
273	LPAR1	Lysophosphatidic acid receptor 1
274	SOWAH3	Sosondawah ankyrin repeat domain family member C
275	CSF2RA	Colony stimulating factor 2 receptor alpha subunit
276	CTNND1	Catenin delta 1
277	MAFB	MAF bZIP transcription factor B
278	C2CD4B	C2 calcium dependent domain containing 4B
279	NAP1L4	Nucleosome assembly protein 1 like 4
280	SMIM11A	Small integral membrane protein 11A

Table SII. Continued.

	Gene symbol	Gene description
281	ITPRIPL2	Inositol 1,4,5-trisphosphate receptor interacting protein like 2
282	S1PR3	Sphingosine-1-phosphate receptor 3
283	PPM1N	Protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1N (putative)
284	TSPAN4	Tetraspanin 4
285	IFI30	IFI30, lysosomal thiol reductase
286	ETV5	ETS variant 5
287	CLEC5A	C-type lectin domain containing 5A
288	ITGB3	Integrin subunit beta 3
289	SRXN1	Sulfiredoxin 1
290	MILR1	Mast cell immunoglobulin like receptor 1

Table SIII. Enriched biological pathways in LTA-stimulated neutrophils (including gene list).

GO ID	GO Term	Genes	FDR
GO:0030335	Positive regulation of cell migration	WNT5A, CCL2, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ITGB3, LPAR1, CCL7, SRC, CXCL10, CCL24, P2RY6, DAB2, PDGFC, GPNMB, THBS1, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, MET, CCL19, MMP14, SEMA6B, PPBP, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH	1.29E-15
GO:0051272	Positive regulation of cellular component movement	WNT5A, CCL2, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ITGB3, LPAR1, CCL7, SRC, CXCL10, CCL24, P2RY6, DAB2, PDGFC, GPNMB, THBS1, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, PDPN, MET, CCL19, MMP14, SEMA6B, PPBP, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH	1.36E-15
GO:2000147	Positive regulation of cell motility	WNT5A, CCL2, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ITGB3, LPAR1, CCL7, SRC, CXCL10, CCL24, P2RY6, DAB2, PDGFC, GPNMB, THBS1, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, MET, CCL19, MMP14, SEMA6B, PPBP, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH	4.11E-15
GO:0030334	Regulation of cell migration	WNT5A, CCL2, CYP1B1, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ITGB3, LPAR1, CCL7, SRC, ADA, CXCL10, CCL24, P2RY6, DAB2, PDGFC, THBS1, GPNMB, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, ABR, PLXNB2, MET, CCL19, DPYSL3, NEXN, MMP14, FAM60A, SEMA6B, LRP1, PPBP, HAS1, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH, ENG	5.16E-15
GO:0040017~	Positive regulation of locomotion	WNT5A, CCL2, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ITGB3, LPAR1, CCL7, SRC, CXCL10, CCL24, P2RY6, DAB2, PDGFC, GPNMB, THBS1, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, MET, CCL19, MMP14, SEMA6B, PPBP, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH	1.16E-14
GO:2000145	Regulation of cell motility	WNT5A, CCL2, CYP1B1, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ARHGAP18, ITGB3, LPAR1, CCL7, SRC, ADA, CXCL10, CCL24, P2RY6, DAB2, PDGFC, THBS1, GPNMB, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, ABR, PLXNB2, MET, CCL19, DPYSL3, NEXN, MMP14, FAM60A, SEMA6B, LRP1, PPBP, HAS1, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH, ENG	1.65E-14
GO:0006954	Inflammatory response	CCL1, WNT5A, CCL2, NDST1, CXCL5, C3, CXCL3, TLR2, TLR3, TNFRSF8, GPR68, TNFRSF4, TLR8, CCL7, ADA, CXCL10, CCL24, SLC11A1, S1PR3, NLRC4, PTGIR, THBS1, CSF1R, C5AR1, ADGRE2, ABR, OLR1, LYZ, CD276, CHST2, CCL19, CD40, CD163, P2RX7, CYBB, P2RX1, PPBP, CXCL13, F3, PLA2G7, METRNL, ALOX5, IL12B, XCL2, CD14	5.54E-14
GO:0040012	Regulation of locomotion	WNT5A, CCL2, CYP1B1, NRP1, SHTN1, PDGFB, CXCL5, PDGFA, MMP9, CXCL3, ARHGAP18, ITGB3, LPAR1, CCL7, SRC, ADA, CXCL10, CCL24, P2RY6, DAB2, PDGFC, THBS1, GPNMB, FGF2, CSF1R, ADAM9, SASH1, C5AR1, FLT1, ABR, PLXNB2, MET, CCL19, DPYSL3, NEXN, MMP14, FAM60A, SEMA6B, LRP1, PPBP, HAS1, CXCL13, F3, CEMIP, PLA2G7, HBEGF, LAMC2, CTSH, ENG	8.90E-14
GO:0006952	Defense response	KYNU, NDST1, TLR2, TLR3, IFI44L, TLR8, CXCL10, S1PR3, NLRC4, PTGIR, USP18, LAG3, C5AR1, ADGRE2, NCF2, CST3, LYZ, HERC5, CHST2, NECTIN2, CD40, CD163, DAPK1, LILRB1, LILRB2, INHBA, CIQB, PPBP, F3, PLA2G7, IL12B, CTSB, CLEC5A, CCL1, WNT5A, CCL2, CXCL5, C3, IFITM3, CXCL3, IFI30, RSAD2, TNFRSF8, GPR68, TNFRSF4, CCL7, ADA, SRC, CCL24, SLC11A1, ITGAX, THBS1, TYROBP, CSF1R, HIST1H2BC, ABR, OLR1, CD276, CD300E, CCL19, KCNN4, CYBB, P2RX7, P2RX1, CXCL13, METRNL, ALOX5, XCL2, IFI6, CD14	9.19E-14

Table SIII. Continued.

GO ID	GO Term	Genes	FDR
GO:0051270	Regulation of cellular component movement	NRP1, PDGFB, SHTN1, PDGFA, MMP9, ARHGAP18, LPAR1, CXCL10, DAB2, PDGFC, FGF2, ADAM9, C5AR1, PDPN, PLXNB2, MMP14, NEXN, PPBP, HAS1, F3, CEMIP, PLA2G7, LAMC2, CTSH, WNT5A, CCL2, CYP1B1, CXCL5, CXCL3, ITGB3, SRC, ADA, CCL7, CCL24, P2RY6, GPNMB, THBS1, CSF1R, SASH1, FLT1, ABR, MET, CCL19, DPYSL3, FAM60A, SEMA6B, LRP1, CXCL13, HBEGF, ENG	9.93E-14
GO:0016477	Cell migration	NRP1, SHTN1, PDGFB, PDGFA, MMP9, MIF, LPAR1, SDC2, CXCL10, DAB2, PDGFC, FGF2, ADAM9, C5AR1, ADGRE2, CCDC88A, PLXNB2, MMP14, SLC7A11, TNS3, THBD, PPBP, HAS1, F3, CEMIP, PLA2G7, LAMC2, VCAN, IL12B, CTSH, CCL1, WNT5A, CCL2, CYP1B1, CXCL5, CXCL3, ITGB3, CCL7, SRC, ADA, CCL24, P2RY6, ITGAX, THBS1, GPNMB, CSF1R, SASH1, FLT1, ABR, OLR1, MET, CCL19, DPYSL3, FAM60A, SEMA6B, LRP1, CXCL13, HBEGF, XCL2, ENG	6.33E-13
GO:0070887	Cellular response to chemical stimulus	GNA15, CYP2J2, NRP1, PDGFB, NDST1, FAM20C, TNFSF15, TLR2, TLR3, ANKRD1, LPAR1, CXCL10, USP18, PTGIR, DAB2, PDGFC, FGF2, CSF2RA, ADAM9, FANCC, PID1, C5AR1, EGR2, SOGA1, ADGRE2, RXRA, CST3, FBP1, CD40, ALDH3B1, DAPK1, LILRB1, LILRB2, INHBA, PPBP, CD80, HAS1, F3, PLA2G7, IL12B, CTSB, CTSH, SRXN1, CCL1, WNT5A, CSF2, CCL2, CYP1B1, CXCL5, IFITM3, CXCL3, SOX5, CD109, IFI30, TNFRSF8, RSAD2, GNG11, GPR68, ABCA1, ITGB3, TNFRSF4, CCL7, SRC, CCL24, VDR, P2RY6, MT1E, THBS1, ETV5, MYOF, CSF1R, SASH1, PTPRE, FLT1, NCEH1, LGALS1, MET, CCL19, DPYSL3, BFAR, DKK3, RAB31, CYBB, P2RX7, ATF3, CXCL13, UCP2, HBEGF, TP6V0A1, ENG, XCL2, IFI6, ACD14, IL3RA	1.89E-12
GO:0006950	Response to stress	GNA15, PDGFB, PDGFA, ARNT2, TLR2, TLR3, ANKRD1, TLR8, CXCL10, S1PR3, NLRC4, PTGIR, PDGFC, ITPK1, TFPI2, ADAM9, C5AR1, NCF2, PDPN, CST3, CD40, PLAUR, LILRB1, LILRB2, C1QB, THBD, PPBP, F3, CLEC5A, NEK6, SRXN1, WNT5A, CCL1, CYP1B1, CCL2, IFITM3, IFI30, KMO, ABCA1, ITGB3, ADA, CCL7, SRC, SLC11A1, ITGAX, HNMT, ARHGEF10L, TYROBP, CSF1R, SASH1, ABR, LGALS1, MET, CD300E, CD276, BFAR, P2RX7, ATF3, P2RX1, UCP2, CXCL13, XCL2, ENG, IFI6, IER3, KYNU, NRP1, NDST1, IFI44L, USP18, MSRA, HPSE, FGF2, LAG3, FANCC, ADGRE2, CHST2, HERC5, LYZ, NECTIN2, MMP14, SLC7A11, ALDH3B1, DAPK1, CD163, INHBA, TOP3A, PLA2G7, IL12B, CTSB, CSF2, CXCL5, C3, CXCL3, CD109, RSAD2, TNFRSF8, GPR68, TNFRSF4, CCL24, C1QTNF1, THBS1, MYOF, ETV5, HIST1H2BC, OLR1, CCL19, DPYSL3, KCNN4, CYBB, HBEGF, METRNL, ALOX5, CD14	4.21E-12
GO:0009605	Response to external stimulus	KYNU, NRP1, PDGFB, PDGFA, MMP7, TLR2, TLR3, IFI44L, ANKRD1, LPAR1, TLR8, CXCL10, NLRC4, PTGIR, HPSE, FGF2, ADAM9, C5AR1, EGR2, ADGRE2, PLXNB2, CST3, LYZ, HERC5, IFI44, CD40, MMP14, PLAUR, LILRB1, LILRB2, NPC2, THBD, CD80, PPBP, F3, PLA2G7, IL12B, CCL1, WNT5A, CSF2, CCL2, CXCL5, C3, IFITM3, CXCL3, CD109, TNFRSF8, RSAD2, ABCA1, ITGB3, TNFRSF4, CCL7, ADA, SRC, CCL24, VDR, SLC11A1, ITGAX, C1QTNF1, GPNMB, THBS1, CSF1R, SASH1, HIST1H2BC, ABR, FLT1, MET, CD276, CCL19, CYBB, P2RX7, SEMA6B, ATF3, CXCL13, UCP2, HBEGF, METRNL, ENG, XCL2, CD14	8.19E-12

Table III. Continued.

GO ID	GO Term	Genes	FDR
GO:0051674	Localization of cell	NRP1, SHTN1, PDGFB, PDGFA, MMP9, MITF, LPAR1, SDC2, CXCL10, DAB2, PDGFC, FGF2, ADAM9, C5AR1, ADGRE2,CCDC88A, PDPN, PLXNB2, NEXN, MMP14, SLC7A11, TNS3, THBD, PPBP, HAS1, F3, CEMIP, PLA2G7, VCAN, LAMC2, ITGB3,IL12B, CTSH, CCL1, WNT5A, CCL2, CYP1B1, CXCL5, CXCL3,CCL7, SRC, ADA, CCL24, P2RY6, ITGAX, THBS1, GPNMB, CSF1R, SASH1, FLT1, ABR, OLR1, MET, CCL19, DPYSL3, FAM60A, SEMA6B, LRP1, CXCL13, HBEGF, XCL2, ENG	8.62E-12
GO:0048870	Cell motility	NRP1, SHTN1, PDGFB, PDGFA, MMP9, MITF, LPAR1, SDC2, CXCL10, DAB2, PDGFC, FGF2, ADAM9, C5AR1, ADGRE2,CCDC88A, PDPN, PLXNB2, NEXN, MMP14, SLC7A11, TNS3, THBD, PPBP, HAS1, F3, CEMIP, PLA2G7, VCAN, LAMC2, IL12B,CTSH, CCL1, WNT5A, CCL2, CYP1B1, CXCL5, CXCL3, ITGB3,CCL7, SRC, ADA, CCL24, P2RY6, ITGAX, THBS1, GPNMB, CSF1R,SASH1, FLT1, ABR, OLR1, MET, CCL19, DPYSL3, FAM60A, SEMA6B, LRP1, CXCL13, HBEGF, XCL2, ENG	8.62E-12
GO:0007166	Cell surface receptor signaling pathway	NRP1, PDGFB, NDST1, SHTN1, PDGFA, MMP9, TSPAN4, TNFSF15, TLR2, TLR3, SDC2, CXCL10, S1PR3, USP18, PTGIR, DAB2, PDGFC, FGF2, LAG3, CSF2RA, ADAM9, PID1, C5AR1, SOGA1, ADGRE2, NCF2, PLXNB2, CD40, MMP14, DAPK1, PLAUR, LILRB1, LILRB2, INHBA, PPBP, F3, PRAM1, IL12B, CCL1, WNT5A, CSF2, REPS2, CCL2, CXCL5, IFITM3, CXCL3,CD109, IFI30, TNFRSF8, CTNND1, RSAD2, CACNB3, FCGRT,ITGB3, ABCA1, TNFRSF4, CCL7, ADA, SIGLEC9, SRC, CCL24, P2RY6, ITGAX, THBS1, CRIM1, TYROBP, CSF1R, DTX4, SASH1 PTPRE, FLT1, NCEH1, MET, CCL19,KCNN4, DKK3, CYBB,SEMA6B, TNFSF10, P2RX7, ATF3, LRP1, P2RX1, CXCL13, HBEGF, ATP6V0A1, ENG, XCL2, IFI6, ADAMDEC1, CD14, IL3RA	2.61E-11
GO:0032879	Regulation of localization	NRP1, SHTN1, PDGFB, PDGFA, MMP9, TLR2, ARHGAP18, TLR3, ANKRD1, LPAR1, TLR8, CXCL10, GPR89B, DAB2, TBC1D12,EVI5, PDGFC, FGF2, ADAM9, PID1, C5AR1, PDPN, PLXNB2,CD40, NEXN, MMP14, DAPK1, LILRB1, LILRB2, INHBA, PPBP, HAS1, F3, PRAM1, PLA2G7, CEMIP, C2CD4B, LAMC2, IL12B, CLEC5A, CTSH, WNT5A, CCL2, CYP1B1, CXCL5, C3, TBC1D9,CXCL3, RSAD2, CACNB3, GPR68, ABCA1, ITGB3, TNFRSF4,CCL7, ADA, SRC, CCL24, SLC11A1, P2RY6, ITGAX, HNMT,C1QTNF1, RASA3, GPNMB, THBS1, CSF1R, SASH1, ABR, FLT1, MET, CD276, RUFY1, CCL19, DPYSL3, FAM60A, KCNN4, CYBB, P2RX7, SEMA6B, LRP1, P2RX1, CXCL13, UCP2, HBEGF, ENG, CD14	6.54E-11
GO:0010033	Response to organic substance	GNA15, KYNU, NRP1, PDGFB, NDST1, FAM20C, ARNT2, TNFSF15, TLR2, TLR3, ANKRD1, LPAR1, CXCL10, USP18, PTGIR, DAB2, PDGFC, FGF2, CSF2RA, ADAM9, PID1, C5AR1, EGR2, SOGA1, RXRA, CST3, CD40, MMP14, SLC7A11, DAPK1, LILRB1, LILRB2, INHBA, THBD, PPBP, CD80, HAS1, F3, IL12B, CTSB, CTSH, CCL1, WNT5A, CSF2, CCL2, CYP1B1, CXCL5, IFITM3, CXCL3, SOX5, CD109, IFI30, TNFRSF8, RSAD2, GNG11, GPR68, ABCA1, ITGB3, TIMP2, TNFRSF4, CCL7, ADA, SRC, CCL24, VDR, SLC11A1, P2RY6, HNMT, THBS1, MYOF, CSF1R, SASH1, PTPRE, ABR, FLT1, LGALS1, CCL19, DPYSL3, BFAR, DKK3, RAB31, CYBB, TNFSF10, P2RX7, ATF3, P2RX1, UCP2, CXCL13, ATP6V0A1, ENG, XCL2, IFI6, CD14, IL3RA	9.42E-11

Table SIII. Continued.

GO ID	GO Term	Genes	FDR
GO:0048583	Regulation of response to stimulus	PDGFB, PDGFA, MMP9, FAM20C, TLR2, TNFSF15, TLR3, ANKRD1, LPAR1, TLR8, CXCL10, GPR89B, NLRC4, PTGIR, DAB2, ARHGEF40, PDGFC, ADAM9, PID1, C5AR1, FBP1, CD40, PLAUR, LILRB1, LILRB2, C1QB, THBD, PPBP, F3, PRAM1, NEK6, WNT5A, CCL1, CYP1B1, CCL2, FCGRT, CACNB3, ABCA1, ITGB3, TIMP2, ADA, CCL7, SRC, RASAL2, SLC11A1, ARHGEF10L, TYROBP, CSF1R, SASH1, ABR, LGALS1, MET, CD300E, CD276, BFAR, TNFSF10, P2RX7, SEMA6B, ATF3, UCP2, CXCL13, XCL2, ENG, IFI6, IER3, NRP1, ARHGAP18, ARHGAP22, USP18, HPSE, FGF2, LAG3, HERC5, NECTIN2, MMP14, DAPK1, INHBA, CD80, TOP3A, PLA2G7, IL12B, CTSB, CTSH, CSF2, CXCL5, C3, CXCL3, CD109, RSAD2, CTNND1, GPR68, MAP3K7CL, TNFRSF4, SIGLEC9, CCL24, C1QTNF1, GPNMB, RASA3, THBS1, MYOF, FLT1, PTPRE, CCL19, KCNN4, DKK3, LRP1, HBEGF, METRNL, CD14, SH3BP2	1.14E-10

Table SIV. Enriched KEGG pathways in LTA-stimulated neutrophils (including gene list).

Path ID	Path name	Genes	Enrichment	P-value	FDR
hsa04060	Cytokine-cytokine receptor interaction	CCL1, CSF2, CCL2, CXCL5, CXCL3, TNFSF15, TNFRSF8, CCL19, CD40, TNFRSF4, CCL7, CXCL10, CCL24, INHBA, TNFSF10, PPBP, CXCL13, IL12B, XCL2, CSF2RA, IL3RA, CSF1R	4.2657	2.88E-08	3.62E-05
hsa05205	Proteoglycans in cancer	WNT5A, MRAS, MMP9, MET, TLR2, ITGB3, SRC, SDC2, PLAUR, HPSE, HBEGF, IL12B, THBS1, FGF2, AKT3	3.5337	7.46E-05	0.0938
hsa04015	Rap1 signaling pathway	FLT1, RASGRP3, PDGFB, PDGFA, MRAS, MET, CTNND1, PDGFC, LPAR1, ITGB3, THBS1, FGF2, AKT3, SRC, CSF1R	3.3655	1.26E-04	0.1585
hsa04062	Chemokine signaling pathway	CCL1, CCL2, CXCL5, CXCL3, CCL19, GNG11, SRC, CCL7, CXCL10, CCL24, PPBP, CXCL13, XCL2, AKT3	3.5464	1.38E-04	0.1738

Table SV. List of 38 significant differentially expressed miRNAs.

	miRNA
1	hsa-let-7e-3p
2	hsa-miR-10a-3p
3	hsa-miR-1271-5p
4	hsa-miR-1291
5	hsa-miR-132-5p
6	hsa-miR-147b
7	hsa-miR-193a-3p
8	hsa-miR-22-5p
9	hsa-miR-31-3p
10	hsa-miR-3173-5p
11	hsa-miR-331-5p
12	hsa-miR-337-3p
13	hsa-miR-34a-5p
14	hsa-miR-34c-5p
15	hsa-miR-362-3p
16	hsa-miR-362-5p
17	hsa-miR-378a-5p
18	hsa-miR-382-5p
19	hsa-miR-3928-3p
20	hsa-miR-422a
21	hsa-miR-4775
22	hsa-miR-500a-5p
23	hsa-miR-550a-3p
24	hsa-miR-5701
25	hsa-miR-574-3p
26	hsa-miR-582-5p
27	hsa-miR-625-5p
28	hsa-miR-627-5p
29	hsa-miR-629-3p
30	hsa-miR-642a-3p
31	hsa-miR-6503-5p
32	hsa-miR-6511a-3p
33	hsa-miR-652-5p
34	hsa-miR-664b-3p
35	hsa-miR-708-5p
36	hsa-miR-708-3p
37	hsa-miR-7977
38	hsa-miR-940
