

# QuantiNova® LNA® Probe PCR Focus Panels (96-Well Format and 384-Well [4 x 96] Format)

## Human Toll-Like Receptor Signaling Pathway

Cat. no. 249955 UPHS-018ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light at 2–8°C for short term storage or at –30°C to –15°C for long time storage. Under these conditions, all components are stable for at least 12 months.

**Note:** Open the package and store the products appropriately immediately upon receipt.

For optimal performance, QuantiNova LNA Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA Probe PCR Handbook at [www.qiagen.com](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	BTK	CASP8	CCL2	CD14	CD180	CD80	CD86	CHUK	CLEC4E	CSF2	CSF3	CXCL10
B	ECSIT	EIF2AK2	ELK1	FADD	FOS	HMGB1	HRAS	HSPA1A	HSPD1	IFNA1	IFNB1	IFNG
C	IKBKB	IL10	IL12A	IL1A	IL1B	IL2	IL6	CXCL8	IRAK1	IRAK2	IRAK4	IRF1
D	IRF3	JUN	LTA	LY86	LY96	MAP2K3	MAP2K4	MAP3K1	MAP3K7	MAP4K4	MAPK8	MAPK8IP3
E	MYD88	NFKB1	NFKB2	NFKBIA	NFKBIL1	NFRKB	NR2C2	PEL1	PPARA	PRKRA	PTGS2	REL
F	RELA	RIPK2	SARM1	SIGIRR	TAB1	TBK1	TICAM1	TICAM2	TIRAP	TLR1	TLR10	TLR2
G	TLR3	TLR4	TLR5	TLR6	TLR7	TLR8	TLR9	TNF	TNFRSF1A	TOLLIP	TRAF6	UBE2N
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH0378767	ENST00000308731.7	BTK	ENSG000000106671	Bruton tyrosine kinase Source HGNC Symbol Acc HGNC 1133
A02	UPFH0522971	ENST00000264275.9	CASP8	ENSG000000064012	caspase 8 Source HGNC Symbol Acc HGNC 1509
A03	UPFH1132783	ENST00000225831.4	CCL2	ENSG000000108691	C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618
A04	UPFH0199310	ENST00000302014.11	CD14	ENSG000000170458	CD14 molecule Source HGNC Symbol Acc HGNC 1628
A05	UPFH0493002	ENST00000256447.5	CD180	ENSG000000134061	CD180 molecule Source HGNC Symbol Acc HGNC 6726
A06	UPFH1132790	ENST00000264246.8	CD80	ENSG000000121594	CD80 molecule Source HGNC Symbol Acc HGNC 1700
A07	UPFH0045195	ENST00000393627.6	CD86	ENSG000000114013	CD86 molecule Source HGNC Symbol Acc HGNC 1705
A08	UPFH1132316	ENST00000370397.8	CHUK	ENSG000000213341	conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974
A09	UPFH1132866	ENST00000299663.7	CLEC4E	ENSG000000166523	C-type lectin domain family 4 member E Source HGNC Symbol Acc HGNC 14555
A10	UPFH1132793	ENST00000296871.4	CSF2	ENSG000000164400	colony stimulating factor 2 Source HGNC Symbol Acc HGNC 2434
A11	UPFH1132794	ENST00000225474.6	CSF3	ENSG000000108342	colony stimulating factor 3 Source HGNC Symbol Acc HGNC 2438
A12	UPFH0196315	ENST00000306602.3	CXCL10	ENSG000000169245	C-X-C motif chemokine ligand 10 Source HGNC Symbol Acc HGNC 10637
B01	UPFH1132377	ENST00000591104.5	ECSIT	ENSG000000130159	ECSIT signalling integrator Source HGNC Symbol Acc HGNC 29548
B02	UPFH0317953	ENST00000395127.6	EIF2AK2	ENSG000000055332	eukaryotic translation initiation factor 2 alpha kinase 2 Source HGNC Symbol Acc HGNC 9437
B03	UPFH0614738	ENST00000376983.8	ELK1	ENSG000000126767	ELK1, ETS transcription factor Source HGNC Symbol Acc HGNC 3321
B04	UPFH1132906	ENST00000301838.4	FADD	ENSG000000168040	Fas associated via death domain Source HGNC Symbol Acc HGNC 3573
B05	UPFH1132401	ENST00000555242.1	FOS	ENSG000000170345	Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796
B06	UPFH1132453	ENST00000341423.10	HMGB1	ENSG000000189403	high mobility group box 1 Source HGNC Symbol Acc HGNC 4983
B07	UPFH1132981	ENST00000311189.8	HRAS	ENSG000000174775	HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173
B08	UPFH1126009	ENST00000375651.6	HSPA1A	ENSG000000204389	heat shock protein family A (Hsp70) member 1A Source HGNC Symbol Acc HGNC 5232
B09	UPFH1132460	ENST00000388968.8	HSPD1	ENSG000000144381	heat shock protein family D (Hsp60) member 1 Source HGNC Symbol Acc HGNC 5261
B10	UPFH0577805	ENST00000276927.2	IFNA1	ENSG000000197919	interferon alpha 1 Source HGNC Symbol Acc HGNC 5417
B11	UPFH1132806	ENST00000380232.4	IFNB1	ENSG000000171855	interferon beta 1 Source HGNC Symbol Acc HGNC 5434
B12	UPFH1132473	ENST00000229135.4	IFNG	ENSG000000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
C01	UPFH0596293	ENST00000649612.2	IKKBK	ENSG000000104365	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960
C02	UPFH0028177	ENST00000423557.1	IL10	ENSG000000136634	interleukin 10 Source HGNC Symbol Acc HGNC 5962
C03	UPFH1132478	ENST00000466512.1	IL12A	ENSG000000168811	interleukin 12A Source HGNC Symbol Acc HGNC 5969
C04	UPFH0436255	ENST00000263339.3	IL1A	ENSG000000115008	interleukin 1 alpha Source HGNC Symbol Acc HGNC 5991
C05	UPFH0163764	ENST00000263341.6	IL1B	ENSG000000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
C06	UPFH0116492	ENST00000226730.4	IL2	ENSG000000109471	interleukin 2 Source HGNC Symbol Acc HGNC 6001
C07	UPFH1172910	ENST00000258743.10	IL6	ENSG000000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
C08	UPFH0120553	ENST00000307407.8	CXCL8	ENSG000000169429	C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025
C09	UPFH1132489	ENST00000393687.6	IRAK1	ENSG000000184216	interleukin 1 receptor associated kinase 1 Source HGNC Symbol Acc HGNC 6112
C10	UPFH1132874	ENST00000256458.5	IRAK2	ENSG000000134070	interleukin 1 receptor associated kinase 2 Source HGNC Symbol Acc HGNC 6113
		ENST000000613		ENSG000000	interleukin 1 receptor associated kinase 4 Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0352633	694.4	IRAK4	198001	17967
C12	UPFH1132490	ENST00000476613.1	IRF1	ENSG00000125347	interferon regulatory factor 1 Source HGNC Symbol Acc HGNC 6116
D01	UPFH0390278	ENST00000599144.5	IRF3	ENSG00000126456	interferon regulatory factor 3 Source HGNC Symbol Acc HGNC 6118
D02	UPFH0569765	ENST00000371222.3	JUN	ENSG00000177606	Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204
D03	UPFH1132824	ENST00000454783.5	LTA	ENSG00000226979	lymphotoxin alpha Source HGNC Symbol Acc HGNC 6709
D04	UPFH1132527	ENST00000379953.6	LY86	ENSG00000112799	lymphocyte antigen 86 Source HGNC Symbol Acc HGNC 16837
D05	UPFH0180748	ENST00000284818.6	LY96	ENSG00000154589	lymphocyte antigen 96 Source HGNC Symbol Acc HGNC 17156
D06	UPFH0309340	ENST00000361818.9	MAP2K3	ENSG00000034152	mitogen-activated protein kinase kinase 3 Source HGNC Symbol Acc HGNC 6843
D07	UPFH1132531	ENST00000353533.10	MAP2K4	ENSG00000065559	mitogen-activated protein kinase kinase 4 Source HGNC Symbol Acc HGNC 6844
D08	UPFH1132532	ENST00000399503.4	MAP3K1	ENSG00000095015	mitogen-activated protein kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6848
D09	UPFH0381277	ENST00000369327.7	MAP3K7	ENSG00000135341	mitogen-activated protein kinase kinase kinase 7 Source HGNC Symbol Acc HGNC 6859
D10	UPFH0283541	ENST00000634702.1	MAP4K4	ENSG00000071054	mitogen-activated protein kinase kinase kinase kinase 4 Source HGNC Symbol Acc HGNC 6866
D11	UPFH1132535	ENST00000374179.8	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
D12	UPFH0477236	ENST00000567849.1	MAPK8IP3	ENSG00000138834	mitogen-activated protein kinase 8 interacting protein 3 Source HGNC Symbol Acc HGNC 6884
E01	UPFH1125930	ENST00000648963.1	MYD88	ENSG00000172936	MYD88, innate immune signal transduction adaptor Source HGNC Symbol Acc HGNC 7562
E02	UPFH1132828	ENST00000226574.9	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E03	UPFH1132591	ENST00000652277.1	NFKB2	ENSG00000077150	nuclear factor kappa B subunit 2 Source HGNC Symbol Acc HGNC 7795
E04	UPFH0444462	ENST00000216797.9	NFKBIA	ENSG00000100906	NFKB inhibitor alpha Source HGNC Symbol Acc HGNC 7797
E05	UPFH1132592	ENST00000376148.9	NFKBIL1	ENSG00000204498	NFKB inhibitor like 1 Source HGNC Symbol Acc HGNC 7800
E06	UPFH1132880	ENST00000531755.5	NFRKB	ENSG00000170322	nuclear factor related to kappaB binding protein Source HGNC Symbol Acc HGNC 7802
E07	UPFH0003970	ENST00000323373.10	NR2C2	ENSG00000177463	nuclear receptor subfamily 2 group C member 2 Source HGNC Symbol Acc HGNC 7972
E08	UPFH1132614	ENST00000358912.5	PELI1	ENSG00000197329	pellino E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 8827
E09	UPFH0327373	ENST00000262735.9	PPARA	ENSG00000186951	peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232
E10	UPFH1132635	ENST00000325748.9	PRKRA	ENSG00000180228	protein activator of interferon induced protein kinase EIF2AK2 Source HGNC Symbol Acc HGNC 9438
E11	UPFH1132642	ENST00000367468.10	PTGS2	ENSG00000073756	prostaglandin-endoperoxide synthase 2 Source HGNC Symbol Acc HGNC 9605
E12	UPFH0559135	ENST00000295025.12	REL	ENSG00000162924	REL proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9954
F01	UPFH1132884	ENST00000615805.4	RELA	ENSG00000173039	RELA proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9955
F02	UPFH1132658	ENST00000220751.5	RIPK2	ENSG00000104312	receptor interacting serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 10020
F03	UPFH0449823	ENST00000580711.1	SARM1	ENSG00000004139	sterile alpha and TIR motif containing 1 Source HGNC Symbol Acc HGNC 17074
F04	UPFH0592642	ENST00000332725.7	SIGIRR	ENSG00000185187	single Ig and TIR domain containing Source HGNC Symbol Acc HGNC 30575
F05	UPFH1132703	ENST00000216160.11	TAB1	ENSG00000100324	TGF-beta activated kinase 1 (MAP3K7) binding protein 1 Source HGNC Symbol Acc HGNC 18157
F06	UPFH1132706	ENST00000652657.1	TBK1	ENSG00000183735	TANK binding kinase 1 Source HGNC Symbol Acc HGNC 11584
F07	UPFH1132848	ENST00000248244.5	TICAM1	ENSG00000127666	toll like receptor adaptor molecule 1 Source NCBI gene Acc 148022
F08	UPFH1132924	ENST00000427199.2	TICAM2	ENSG00000243414	toll like receptor adaptor molecule 2 Source HGNC Symbol Acc HGNC 21354
F09	UPFH0331111	ENST00000392680.6	TIRAP	ENSG00000150455	TIR domain containing adaptor protein Source HGNC Symbol Acc HGNC 17192
F10	UPFH0034752	ENST00000308979.7	TLR1	ENSG00000174125	toll like receptor 1 Source HGNC Symbol Acc HGNC 11847

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132728	ENST00000308973.9	TLR10	ENSG00000174123	toll like receptor 10 Source HGNC Symbol Acc HGNC 15634
F12	UPFH0035742	ENST00000642700.1	TLR2	ENSG00000137462	toll like receptor 2 Source HGNC Symbol Acc HGNC 11848
G01	UPFH0561110	ENST00000296795.7	TLR3	ENSG00000164342	toll like receptor 3 Source HGNC Symbol Acc HGNC 11849
G02	UPFH1132859	ENST00000645071.1	TLR4	ENSG00000136869	toll like receptor 4 Source HGNC Symbol Acc HGNC 11850
G03	UPFH1132729	ENST00000366881.6	TLR5	ENSG00000187554	toll like receptor 5 Source HGNC Symbol Acc HGNC 11851
G04	UPFH1172914	ENST00000508254.5	TLR6	ENSG00000174130	toll like receptor 6 Source HGNC Symbol Acc HGNC 16711
G05	UPFH1132849	ENST00000380659.4	TLR7	ENSG00000196664	toll like receptor 7 Source HGNC Symbol Acc HGNC 15631
G06	UPFH0324928	ENST00000218032.6	TLR8	ENSG00000101916	toll like receptor 8 Source HGNC Symbol Acc HGNC 15632
G07	UPFH1172915	ENST00000360658.2	TLR9	ENSG00000239732	toll like receptor 9 Source HGNC Symbol Acc HGNC 15633
G08	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G09	UPFH1132732	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G10	UPFH0007721	ENST00000528719.1	TOLLIP	ENSG00000078902	toll interacting protein Source HGNC Symbol Acc HGNC 16476
G11	UPFH1132739	ENST00000348124.5	TRAF6	ENSG00000175104	TNF receptor associated factor 6 Source HGNC Symbol Acc HGNC 12036
G12	UPFH1132934	ENST00000549833.1	UBE2N	ENSG00000177889	ubiquitin conjugating enzyme E2 N Source HGNC Symbol Acc HGNC 12492
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
QuantiNova Reverse Transcription Kit (10)*	For 10 x 20 $\mu$ l reactions: 20 $\mu$ l 8x gDNA Removal Mix, 10 $\mu$ l Reverse Transcription Enzyme, 40 $\mu$ l Reverse Transcription Mix (containing RT primers), 20 $\mu$ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova Probe RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe RT Mix, 20 $\mu$ l Internal Control RNA, 500 $\mu$ l Yellow Template Dilution Buffer, 250 $\mu$ l ROX Reference Dye, 1.9 $\mu$ l RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208252

\*Larger kit sizes available.

The QuantiNova LNA Probe PCR Focus Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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