

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

## Human T Helper Cell Differentiation

Cat. no. 249955 UPHS-503ZA

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	ASB2	CACNA1F	CCL5	CCL7	CCR3	CCR4	CCR5	CCR6	CEBPB	CHD7	EOMES	FASLG
B	FOSL1	FOXP3	GATA3	GATA4	GFI1	PTGDR2	HAVCR2	HOPX	HOXA10	HOXA3	ICOS	ID2
C	IFNG	IGSF6	IKZF2	IL12B	IL12RB2	IL13	IL13RA1	IL17A	IL17RE	IL18	IL18R1	IL18RAP
D	IL1R1	IL1R2	IL1RL1	IL2	IL21	IL2RA	IL4	IL4R	IL5	IL9	IRF1	IRF4
E	IRF8	JAK1	KIF2C	LRRC32	MAF	MYB	NFATC1	NFATC2	NR4A1	NR4A3	PERP	PKD2
F	POU2F2	PPARG	REL	RELB	RORA	RORC	RUNX1	RUNX3	SOCS1	SOCS5	STAT1	STAT4
G	STAT6	TBX21	TGIF1	TLR4	TLR6	TNF	TNFRSF9	TNFSF11	TOX	TP53INP1	UTS2	ZBTB7B
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	UPFH0202458	ENST00000555507.5	ASB2	ENSG00000100628	ankyrin repeat and SOCS box containing 2 Source HGNC Symbol Acc HGNC 16012
A02	UPFH0096904	ENST00000376265.2	CACNA1F	ENSG00000102001	calcium voltage-gated channel subunit alpha1 F Source HGNC Symbol Acc HGNC 1393
A03	UPFH1132786	ENST00000603197.6	CCL5	ENSG00000271503	C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632
A04	UPFH0186519	ENST00000378569.2	CCL7	ENSG00000108688	C-C motif chemokine ligand 7 Source HGNC Symbol Acc HGNC 10634
A05	UPFH1132788	ENST00000395940.3	CCR3	ENSG00000183625	C-C motif chemokine receptor 3 Source HGNC Symbol Acc HGNC 1604
A06	UPFH0179708	ENST00000330953.5	CCR4	ENSG00000183813	C-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 1605
A07	UPFH1132860	ENST00000292303.4	CCR5	ENSG00000160791	C-C motif chemokine receptor 5 (gene/pseudogene) Source HGNC Symbol Acc HGNC 1606
A08	UPFH1172903	ENST00000349984.6	CCR6	ENSG00000112486	C-C motif chemokine receptor 6 Source HGNC Symbol Acc HGNC 1607
A09	UPFH0202295	ENST00000303004.4	CEBPB	ENSG00000172216	CCAAT enhancer binding protein beta Source HGNC Symbol Acc HGNC 1834
A10	UPFH0134243	ENST00000525508.1	CHD7	ENSG00000171316	chromodomain helicase DNA binding protein 7 Source HGNC Symbol Acc HGNC 20626
A11	UPFH0615021	ENST00000461503.2	EOMES	ENSG00000163508	eomesodermin Source HGNC Symbol Acc HGNC 3372
A12	UPFH1132396	ENST00000367721.3	FASLG	ENSG00000117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
B01	UPFH0457684	ENST00000312562.6	FOSL1	ENSG00000175592	FOS like 1, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 13718
B02	UPFH1132403	ENST00000557224.6	FOXP3	ENSG00000049768	forkhead box P3 Source HGNC Symbol Acc HGNC 6106
B03	UPFH1132416	ENST00000645492.1	GATA3	ENSG00000107485	GATA binding protein 3 Source HGNC Symbol Acc HGNC 4172
B04	UPFH0226376	ENST00000532059.5	GATA4	ENSG00000136574	GATA binding protein 4 Source HGNC Symbol Acc HGNC 4173
B05	UPFH0377131	ENST00000294702.6	GFI1	ENSG00000162676	growth factor independent 1 transcriptional repressor Source HGNC Symbol Acc HGNC 4237
B06	UPFH0150140	ENST00000332539.5	PTGDR2	ENSG00000183134	prostaglandin D2 receptor 2 Source HGNC Symbol Acc HGNC 4502
B07	UPFH0231044	ENST00000522593.5	HAVCR2	ENSG00000135077	hepatitis A virus cellular receptor 2 Source HGNC Symbol Acc HGNC 18437
B08	UPFH0063993	ENST00000503639.7	HOPX	ENSG00000171476	HOP homeobox Source HGNC Symbol Acc HGNC 24961
B09	UPFH0101067	ENST00000524368.1	HOXA10	ENSG00000253293	homeobox A10 Source HGNC Symbol Acc HGNC 5100
B10	UPFH0356448	ENST00000317201.6	HOXA3	ENSG00000105997	homeobox A3 Source HGNC Symbol Acc HGNC 5104
B11	UPFH0092255	ENST00000316386.10	ICOS	ENSG00000163600	inducible T cell costimulator Source HGNC Symbol Acc HGNC 5351
B12	UPFH1132464	ENST00000331129.3	ID2	ENSG00000115738	inhibitor of DNA binding 2 Source HGNC Symbol Acc HGNC 5361
C01	UPFH1132473	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
C02	UPFH0365323	ENST00000565499.1	IGSF6	ENSG00000140749	immunoglobulin superfamily member 6 Source HGNC Symbol Acc HGNC 5953
C03	UPFH0403056	ENST00000374326.7	IKZF2	ENSG00000030419	IKAROS family zinc finger 2 Source HGNC Symbol Acc HGNC 13177
C04	UPFH0131869	ENST00000231228.2	IL12B	ENSG00000113302	interleukin 12B Source HGNC Symbol Acc HGNC 5970
C05	UPFH0010120	ENST00000541374.5	IL12RB2	ENSG00000081985	interleukin 12 receptor subunit beta 2 Source HGNC Symbol Acc HGNC 5972
C06	UPFH1132807	ENST00000617259.2	IL13	ENSG00000169194	interleukin 13 Source HGNC Symbol Acc HGNC 5973
C07	UPFH0240636	ENST00000371642.1	IL13RA1	ENSG00000131724	interleukin 13 receptor subunit alpha 1 Source HGNC Symbol Acc HGNC 5974
C08	UPFH0091505	ENST00000648244.1	IL17A	ENSG00000112115	interleukin 17A Source HGNC Symbol Acc HGNC 5981
C09	UPFH0101815	ENST00000489181.5	IL17RE	ENSG00000163701	interleukin 17 receptor E Source HGNC Symbol Acc HGNC 18439
C10	UPFH1132481	ENST00000528832.1	IL18	ENSG00000150782	interleukin 18 Source HGNC Symbol Acc HGNC 5986
		ENST00000233		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0567076	957.5	IL18R1	115604	interleukin 18 receptor 1 Source HGNC Symbol Acc HGNC 5988
C12	UPFH0510300	ENST00000264260.6	IL18RAP	ENSG00000115607	interleukin 18 receptor accessory protein Source HGNC Symbol Acc HGNC 5989
D01	UPFH1132482	ENST00000442590.5	IL1R1	ENSG00000115594	interleukin 1 receptor type 1 Source HGNC Symbol Acc HGNC 5993
D02	UPFH0176161	ENST00000441002.1	IL1R2	ENSG00000115590	interleukin 1 receptor type 2 Source HGNC Symbol Acc HGNC 5994
D03	UPFH0302915	ENST00000404917.6	IL1RL1	ENSG00000115602	interleukin 1 receptor like 1 Source HGNC Symbol Acc HGNC 5998
D04	UPFH0116492	ENST00000226730.4	IL2	ENSG00000109471	interleukin 2 Source HGNC Symbol Acc HGNC 6001
D05	UPFH0321856	ENST00000648588.1	IL21	ENSG00000138684	interleukin 21 Source HGNC Symbol Acc HGNC 6005
D06	UPFH0323649	ENST00000447847.1	IL2RA	ENSG00000134460	interleukin 2 receptor subunit alpha Source HGNC Symbol Acc HGNC 6008
D07	UPFH0226437	ENST00000231449.7	IL4	ENSG00000113520	interleukin 4 Source HGNC Symbol Acc HGNC 6014
D08	UPFH0363455	ENST00000563886.1	IL4R	ENSG00000077238	interleukin 4 receptor Source HGNC Symbol Acc HGNC 6015
D09	UPFH1132811	ENST00000231454.6	IL5	ENSG00000113525	interleukin 5 Source HGNC Symbol Acc HGNC 6016
D10	UPFH0611711	ENST00000274520.1	IL9	ENSG00000145839	interleukin 9 Source HGNC Symbol Acc HGNC 6029
D11	UPFH1132490	ENST00000476613.1	IRF1	ENSG00000125347	interferon regulatory factor 1 Source HGNC Symbol Acc HGNC 6116
D12	UPFH0051290	ENST00000380956.9	IRF4	ENSG00000137265	interferon regulatory factor 4 Source HGNC Symbol Acc HGNC 6119
E01	UPFH0264126	ENST00000564056.1	IRF8	ENSG00000140968	interferon regulatory factor 8 Source HGNC Symbol Acc HGNC 5358
E02	UPFH1132963	ENST00000342505.5	JAK1	ENSG00000162434	Janus kinase 1 Source HGNC Symbol Acc HGNC 6190
E03	UPFH0093735	ENST00000452259.5	KIF2C	ENSG00000142945	kinesin family member 2C Source HGNC Symbol Acc HGNC 6393
E04	UPFH0043299	ENST00000407242.6	LRRC32	ENSG00000137507	leucine rich repeat containing 32 Source HGNC Symbol Acc HGNC 4161
E05	UPFH0572800	ENST00000326043.5	MAF	ENSG00000178573	MAF bZIP transcription factor Source HGNC Symbol Acc HGNC 6776
E06	UPFH0414191	ENST00000528015.5	MYB	ENSG00000118513	MYB proto-oncogene, transcription factor Source HGNC Symbol Acc HGNC 7545
E07	UPFH0595445	ENST00000591814.5	NFATC1	ENSG00000131196	nuclear factor of activated T cells 1 Source HGNC Symbol Acc HGNC 7775
E08	UPFH0101128	ENST00000610033.5	NFATC2	ENSG00000101096	nuclear factor of activated T cells 2 Source HGNC Symbol Acc HGNC 7776
E09	UPFH0094876	ENST00000550763.1	NR4A1	ENSG00000123358	nuclear receptor subfamily 4 group A member 1 Source HGNC Symbol Acc HGNC 7980
E10	UPFH0009540	ENST00000618101.4	NR4A3	ENSG00000119508	nuclear receptor subfamily 4 group A member 3 Source HGNC Symbol Acc HGNC 7982
E11	UPFH0012036	ENST00000421351.4	PERP	ENSG00000112378	PERP, TP53 apoptosis effector Source HGNC Symbol Acc HGNC 17637
E12	UPFH0219499	ENST00000508588.5	PKD2	ENSG00000118762	polycystin 2, transient receptor potential cation channel Source HGNC Symbol Acc HGNC 9009
F01	UPFH0005408	ENST00000625670.2	POU2F2	ENSG00000028277	POU class 2 homeobox 2 Source HGNC Symbol Acc HGNC 9213
F02	UPFH0284890	ENST00000477039.5	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F03	UPFH0559135	ENST00000295025.12	REL	ENSG00000162924	REL proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9954
F04	UPFH0241038	ENST00000625761.2	RELB	ENSG00000104856	RELB proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9956
F05	UPFH0374720	ENST00000335670.11	RORA	ENSG00000069667	RAR related orphan receptor A Source HGNC Symbol Acc HGNC 10258
F06	UPFH1132662	ENST00000318247.7	RORC	ENSG00000143365	RAR related orphan receptor C Source HGNC Symbol Acc HGNC 10260
F07	UPFH0023287	ENST00000437180.5	RUNX1	ENSG00000159216	runt related transcription factor 1 Source HGNC Symbol Acc HGNC 10471
F08	UPFH0389770	ENST00000496967.1	RUNX3	ENSG00000020633	runt related transcription factor 3 Source HGNC Symbol Acc HGNC 10473
F09	UPFH1132887	ENST00000644787.1	SOCS1	ENSG00000185338	suppressor of cytokine signaling 1 Source HGNC Symbol Acc HGNC 19383
F10	UPFH0133368	ENST00000306503.5	SOCS5	ENSG00000171150	suppressor of cytokine signaling 5 Source HGNC Symbol Acc HGNC 16852

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132696	ENST00000392323.6	STAT1	ENSG00000115415	signal transducer and activator of transcription 1 Source HGNC Symbol Acc HGNC 11362
F12	UPFH1132697	ENST00000392320.7	STAT4	ENSG00000138378	signal transducer and activator of transcription 4 Source HGNC Symbol Acc HGNC 11365
G01	UPFH1132845	ENST00000553533.2	STAT6	ENSG00000166888	signal transducer and activator of transcription 6 Source HGNC Symbol Acc HGNC 11368
G02	UPFH0331267	ENST00000177694.2	TBX21	ENSG00000073861	T-box 21 Source HGNC Symbol Acc HGNC 11599
G03	UPFH1132722	ENST00000407501.6	TGIF1	ENSG00000177426	TGFB induced factor homeobox 1 Source HGNC Symbol Acc HGNC 11776
G04	UPFH1132859	ENST00000645071.1	TLR4	ENSG00000136869	toll like receptor 4 Source HGNC Symbol Acc HGNC 11850
G05	UPFH1172914	ENST00000508254.5	TLR6	ENSG00000174130	toll like receptor 6 Source HGNC Symbol Acc HGNC 16711
G06	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G07	UPFH0607162	ENST00000615230.4	TNFRSF9	ENSG00000049249	TNF receptor superfamily member 9 Source HGNC Symbol Acc HGNC 11924
G08	UPFH1132852	ENST00000544862.5	TNFSF11	ENSG00000120659	TNF superfamily member 11 Source HGNC Symbol Acc HGNC 11926
G09	UPFH0012953	ENST00000361421.2	TOX	ENSG00000198846	thymocyte selection associated high mobility group box Source HGNC Symbol Acc HGNC 18988
G10	UPFH0543080	ENST00000448464.6	TP53INP1	ENSG00000164938	tumor protein p53 inducible nuclear protein 1 Source HGNC Symbol Acc HGNC 18022
G11	UPFH0449260	ENST00000377516.6	UTS2	ENSG00000049247	urotensin 2 Source HGNC Symbol Acc HGNC 12636
G12	UPFH0423864	ENST00000487542.1	ZBTB7B	ENSG00000160685	zinc finger and BTB domain containing 7B Source HGNC Symbol Acc HGNC 18668
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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at [www.qiagen.com](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, LNA®, QuantiNova®, Sample to Insight® (QIAGEN Group); SYBR® (Life Technologies Corp.). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law.

09/2019 © 2019 QIAGEN, all rights reserved.