

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

## Human Transplant Rejection

Cat. no. 249955 UPHS-166ZA

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	ADAM17	BMP7	C3	CASP1	CASP3	CASP8	CCL11	CCL2	CCL3	CCL4	CCL5	CCR2
B	CCR3	CCR5	CCR7	CD14	CD28	CD40	CD40LG	CD44	CD80	CD86	CD8A	COL1A2
C	CSF2	CCN2	CTLA4	CX3CR1	CXCL10	CXCL11	CXCL9	CXCR3	CXCR4	FAS	FASLG	FCGR1A
D	GZMA	GZMB	ICAM1	IFNG	IL10	IL12A	IL13	IL16	IL18	IL2	IL2RA	IL3
E	IL32	IL4	IL5	IL6	CXCL8	ITGA2	ITGAE	ITGAM	MMP1	MMP2	MMP7	MMP9
F	MS4A1	NFKB1	NOS2	PECAM1	PRF1	PSMB9	STAT1	STAT4	STAT6	TAP1	TGFB1	TGFB2
G	TGFB3	THBS1	THBS2	TIMP1	TLR3	TLR4	TLR9	TNF	TNFAIP3	TNFSF10	VCAM1	VEGFA
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	UPFH1132216	ENST00000497134.6	ADAM17	ENSG00000151694	ADAM metallopeptidase domain 17 Source HGNC Symbol Acc HGNC 195
A02	UPFH1132781	ENST00000433911.1	BMP7	ENSG00000101144	bone morphogenetic protein 7 Source HGNC Symbol Acc HGNC 1074
A03	UPFH1132902	ENST00000596548.1	C3	ENSG00000125730	complement C3 Source HGNC Symbol Acc HGNC 1318
A04	UPFH0285144	ENST00000436863.7	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
A05	UPFH1132892	ENST00000523916.5	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
A06	UPFH0522971	ENST00000264275.9	CASP8	ENSG00000064012	caspase 8 Source HGNC Symbol Acc HGNC 1509
A07	UPFH0201571	ENST00000305869.3	CCL11	ENSG00000172156	C-C motif chemokine ligand 11 Source HGNC Symbol Acc HGNC 10610
A08	UPFH1132783	ENST00000225831.4	CCL2	ENSG00000108691	C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618
A09	UPFH1132784	ENST00000613922.2	CCL3	ENSG00000277632	C-C motif chemokine ligand 3 Source HGNC Symbol Acc HGNC 10627
A10	UPFH1132785	ENST00000615863.2	CCL4	ENSG00000275302	C-C motif chemokine ligand 4 Source HGNC Symbol Acc HGNC 10630
A11	UPFH1132786	ENST00000603197.6	CCL5	ENSG00000271503	C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632
A12	UPFH0175349	ENST00000445132.2	CCR2	ENSG00000121807	C-C motif chemokine receptor 2 Source HGNC Symbol Acc HGNC 1603
B01	UPFH1132788	ENST00000395940.3	CCR3	ENSG00000183625	C-C motif chemokine receptor 3 Source HGNC Symbol Acc HGNC 1604
B02	UPFH1132860	ENST00000292303.4	CCR5	ENSG00000160791	C-C motif chemokine receptor 5 (gene/pseudogene) Source HGNC Symbol Acc HGNC 1606
B03	UPFH0507765	ENST00000246657.2	CCR7	ENSG00000126353	C-C motif chemokine receptor 7 Source HGNC Symbol Acc HGNC 1608
B04	UPFH0199310	ENST00000302014.11	CD14	ENSG00000170458	CD14 molecule Source HGNC Symbol Acc HGNC 1628
B05	UPFH0310921	ENST00000458610.6	CD28	ENSG00000178562	CD28 molecule Source HGNC Symbol Acc HGNC 1653
B06	UPFH0317626	ENST00000372285.7	CD40	ENSG00000101017	CD40 molecule Source HGNC Symbol Acc HGNC 11919
B07	UPFH0592498	ENST00000370629.6	CD40LG	ENSG00000102245	CD40 ligand Source HGNC Symbol Acc HGNC 11935
B08	UPFH0253499	ENST00000428726.7	CD44	ENSG00000026508	CD44 molecule (Indian blood group) Source HGNC Symbol Acc HGNC 1681
B09	UPFH1132790	ENST00000264246.8	CD80	ENSG00000121594	CD80 molecule Source HGNC Symbol Acc HGNC 1700
B10	UPFH0045195	ENST00000393627.6	CD86	ENSG00000114013	CD86 molecule Source HGNC Symbol Acc HGNC 1705
B11	UPFH0396984	ENST00000409781.1	CD8A	ENSG00000153563	CD8a molecule Source HGNC Symbol Acc HGNC 1706
B12	UPFH1132970	ENST00000620463.1	COL1A2	ENSG00000164692	collagen type I alpha 2 chain Source HGNC Symbol Acc HGNC 2198
C01	UPFH1132793	ENST00000296871.4	CSF2	ENSG00000164400	colony stimulating factor 2 Source HGNC Symbol Acc HGNC 2434
C02	UPFH1132340	ENST00000367976.4	CCN2	ENSG00000118523	cellular communication network factor 2 Source HGNC Symbol Acc HGNC 2500
C03	UPFH0603710	ENST00000427473.3	CTLA4	ENSG00000163599	cytotoxic T-lymphocyte associated protein 4 Source HGNC Symbol Acc HGNC 2505
C04	UPFH0561943	ENST00000399220.2	CX3CR1	ENSG00000168329	C-X3-C motif chemokine receptor 1 Source HGNC Symbol Acc HGNC 2558
C05	UPFH0196315	ENST00000306602.3	CXCL10	ENSG00000169245	C-X-C motif chemokine ligand 10 Source HGNC Symbol Acc HGNC 10637
C06	UPFH0421123	ENST00000306621.7	CXCL11	ENSG00000169248	C-X-C motif chemokine ligand 11 Source HGNC Symbol Acc HGNC 10638
C07	UPFH0222764	ENST00000264888.5	CXCL9	ENSG00000138755	C-X-C motif chemokine ligand 9 Source HGNC Symbol Acc HGNC 7098
C08	UPFH1132799	ENST00000373693.4	CXCR3	ENSG00000186810	C-X-C motif chemokine receptor 3 Source HGNC Symbol Acc HGNC 4540
C09	UPFH0570418	ENST00000241393.3	CXCR4	ENSG00000121966	C-X-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 2561
C10	UPFH1132395	ENST00000357339.6	FAS	ENSG00000026103	Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920
		ENST00000367		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH1132396	721.3	FASLG	117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
C12	UPFH0313882	ENST00000444948.5	FCGR1A	ENSG00000150337	Fc fragment of IgG receptor Ia Source HGNC Symbol Acc HGNC 3613
D01	UPFH0459336	ENST00000274306.7	GZMA	ENSG00000145649	granzyme A Source HGNC Symbol Acc HGNC 4708
D02	UPFH0018541	ENST00000526004.1	GZMB	ENSG00000100453	granzyme B Source HGNC Symbol Acc HGNC 4709
D03	UPFH1132462	ENST00000264832.8	ICAM1	ENSG00000090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
D04	UPFH1132473	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
D05	UPFH0028177	ENST00000423557.1	IL10	ENSG00000136634	interleukin 10 Source HGNC Symbol Acc HGNC 5962
D06	UPFH1132478	ENST00000466512.1	IL12A	ENSG00000168811	interleukin 12A Source HGNC Symbol Acc HGNC 5969
D07	UPFH1132807	ENST00000617259.2	IL13	ENSG00000169194	interleukin 13 Source HGNC Symbol Acc HGNC 5973
D08	UPFH0104353	ENST00000394652.6	IL16	ENSG00000172349	interleukin 16 Source HGNC Symbol Acc HGNC 5980
D09	UPFH0163764	ENST00000263341.6	IL1B	ENSG00000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
D10	UPFH0116492	ENST00000226730.4	IL2	ENSG00000109471	interleukin 2 Source HGNC Symbol Acc HGNC 6001
D11	UPFH0323649	ENST00000447847.1	IL2RA	ENSG00000134460	interleukin 2 receptor subunit alpha Source HGNC Symbol Acc HGNC 6008
D12	UPFH0282899	ENST00000296870.2	IL3	ENSG00000164399	interleukin 3 Source HGNC Symbol Acc HGNC 6011
E01	UPFH0241670	ENST00000396890.6	IL32	ENSG00000008517	interleukin 32 Source HGNC Symbol Acc HGNC 16830
E02	UPFH0226437	ENST00000231449.7	IL4	ENSG00000113520	interleukin 4 Source HGNC Symbol Acc HGNC 6014
E03	UPFH1132811	ENST00000231454.6	IL5	ENSG00000113525	interleukin 5 Source HGNC Symbol Acc HGNC 6016
E04	UPFH1172910	ENST00000258743.10	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
E05	UPFH0120553	ENST00000307407.8	CXCL8	ENSG00000169429	C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025
E06	UPFH1132496	ENST00000296585.10	ITGA2	ENSG00000164171	integrin subunit alpha 2 Source HGNC Symbol Acc HGNC 6137
E07	UPFH0255503	ENST00000572433.5	ITGAE	ENSG00000083457	integrin subunit alpha E Source HGNC Symbol Acc HGNC 6147
E08	UPFH0542903	ENST00000287497.13	ITGAM	ENSG00000169896	integrin subunit alpha M Source HGNC Symbol Acc HGNC 6149
E09	UPFH0322484	ENST00000315274.7	MMP1	ENSG00000196611	matrix metalloproteinase 1 Source HGNC Symbol Acc HGNC 7155
E10	UPFH1132551	ENST00000437642.6	MMP2	ENSG00000087245	matrix metalloproteinase 2 Source HGNC Symbol Acc HGNC 7166
E11	UPFH0230006	ENST00000260227.5	MMP7	ENSG00000137673	matrix metalloproteinase 7 Source HGNC Symbol Acc HGNC 7174
E12	UPFH0367626	ENST00000372330.3	MMP9	ENSG00000100985	matrix metalloproteinase 9 Source HGNC Symbol Acc HGNC 7176
F01	UPFH0464870	ENST00000532073.5	MS4A1	ENSG00000156738	membrane spanning 4-domains A1 Source HGNC Symbol Acc HGNC 7315
F02	UPFH1132828	ENST00000226574.9	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
F03	UPFH0572128	ENST00000313735.10	NOS2	ENSG00000007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
F04	UPFH1132613	ENST00000563924.6	PECAM1	ENSG00000261371	platelet and endothelial cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 8823
F05	UPFH0120472	ENST00000639390.1	PRF1	ENSG00000180644	perforin 1 Source HGNC Symbol Acc HGNC 9360
F06	UPFH0121342	ENST00000374859.3	PSMB9	ENSG00000240065	proteasome subunit beta 9 Source HGNC Symbol Acc HGNC 9546
F07	UPFH1132696	ENST00000392323.6	STAT1	ENSG00000115415	signal transducer and activator of transcription 1 Source HGNC Symbol Acc HGNC 11362
F08	UPFH1132697	ENST00000392320.7	STAT4	ENSG00000138378	signal transducer and activator of transcription 4 Source HGNC Symbol Acc HGNC 11365
F09	UPFH1132845	ENST00000553533.2	STAT6	ENSG00000166888	signal transducer and activator of transcription 6 Source HGNC Symbol Acc HGNC 11368
F10	UPFH1132705	ENST00000354258.4	TAP1	ENSG00000168394	transporter 1, ATP binding cassette subfamily B member Source HGNC Symbol Acc HGNC 43

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0193430	ENST00000221930.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
F12	UPFH1132846	ENST00000366929.4	TGFB2	ENSG00000092969	transforming growth factor beta 2 Source HGNC Symbol Acc HGNC 11768
G01	UPFH0000256	ENST00000238682.7	TGFB3	ENSG00000119699	transforming growth factor beta 3 Source HGNC Symbol Acc HGNC 11769
G02	UPFH1132847	ENST00000260356.5	THBS1	ENSG00000137801	thrombospondin 1 Source HGNC Symbol Acc HGNC 11785
G03	UPFH1125960	ENST00000366787.7	THBS2	ENSG00000186340	thrombospondin 2 Source HGNC Symbol Acc HGNC 11786
G04	UPFH1132725	ENST00000456754.6	TIMP1	ENSG00000102265	TIMP metalloproteinase inhibitor 1 Source HGNC Symbol Acc HGNC 11820
G05	UPFH0561110	ENST00000296795.7	TLR3	ENSG00000164342	toll like receptor 3 Source HGNC Symbol Acc HGNC 11849
G06	UPFH1132859	ENST00000645071.1	TLR4	ENSG00000136869	toll like receptor 4 Source HGNC Symbol Acc HGNC 11850
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	UPFH0576817	ENST00000485192.1	TNFAIP3	ENSG00000118503	TNF alpha induced protein 3 Source HGNC Symbol Acc HGNC 11896
G10	UPFH1132733	ENST00000241261.7	TNFSF10	ENSG00000121858	TNF superfamily member 10 Source HGNC Symbol Acc HGNC 11925
G11	UPFH1132856	ENST00000294728.7	VCAM1	ENSG00000162692	vascular cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 12663
G12	UPFH0281656	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
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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