

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

## Human Mesenchymal Stem Cells

Cat. no. 249955 UPHS-082ZA

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	ABCB1	ACTA2	ALCAM	ANPEP	ANXA5	BDNF	BGLAP	BMP2	BMP4	BMP6	BMP7	CASP3
B	CD44	COL1A1	CSF2	CSF3	CTNNB1	EGF	ENG	ERBB2	FGF10	FGF2	FUT1	FUT4
C	FZD9	GDF15	GDF5	GDF6	GDF7	GTF3A	HAT1	HDAC1	HGF	HNF1A	ICAM1	IFNG
D	IGF1	IL10	IL1B	IL6	INS	ITGA6	ITGAV	ITGAX	ITGB1	JAG1	KAT2B	KDR
E	KITLG	LIF		MMP2	NES	NGFR	NOTCH1	NT5E	NUDT6	PDGFRB	PIGS	POU5F1
F	PPARG	PROM1	PTK2	PTPRC	RHOA	RUNX2	SLC17A5	SMAD4	SMURF1	SMURF2	SOX2	SOX9
G	TBX5	TERT	TGFB1	TGFB3	THY1	TNF	VCAM1	VEGFA	VIM	WWF	WNT3A	ZFP42
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	UPFH0266833	ENST00000483831.1	ABCB1	ENSG00000085563	ATP binding cassette subfamily B member 1 Source HGNC Symbol Acc HGNC 40
A02	UPFH0537484	ENST00000224784.10	ACTA2	ENSG00000107796	actin, alpha 2, smooth muscle, aorta Source HGNC Symbol Acc HGNC 130
A03	UPFH0482520	ENST00000486979.6	ALCAM	ENSG00000170017	activated leukocyte cell adhesion molecule Source HGNC Symbol Acc HGNC 400
A04	UPFH1132234	ENST00000300060.7	ANPEP	ENSG00000166825	alanyl aminopeptidase, membrane Source HGNC Symbol Acc HGNC 500
A05	UPFH1132775	ENST00000515017.5	ANXA5	ENSG00000164111	annexin A5 Source HGNC Symbol Acc HGNC 543
A06	UPFH0520944	ENST00000525528.1	BDNF	ENSG00000176697	brain derived neurotrophic factor Source HGNC Symbol Acc HGNC 1033
A07	UPFH1132966	ENST00000368272.5	BGLAP	ENSG00000242252	bone gamma-carboxyglutamate protein Source HGNC Symbol Acc HGNC 1043
A08	UPFH1132780	ENST00000378827.5	BMP2	ENSG00000125845	bone morphogenetic protein 2 Source HGNC Symbol Acc HGNC 1069
A09	UPFH0443169	ENST00000558984.1	BMP4	ENSG00000125378	bone morphogenetic protein 4 Source HGNC Symbol Acc HGNC 1071
A10	UPFH1172901	ENST00000283147.7	BMP6	ENSG00000153162	bone morphogenetic protein 6 Source HGNC Symbol Acc HGNC 1073
A11	UPFH1132781	ENST00000433911.1	BMP7	ENSG00000101144	bone morphogenetic protein 7 Source HGNC Symbol Acc HGNC 1074
A12	UPFH1132892	ENST00000523916.5	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B01	UPFH0253499	ENST00000428726.7	CD44	ENSG00000026508	CD44 molecule (Indian blood group) Source HGNC Symbol Acc HGNC 1681
B02	UPFH0361104	ENST00000225964.9	COL1A1	ENSG00000108821	collagen type I alpha 1 chain Source HGNC Symbol Acc HGNC 2197
B03	UPFH1132793	ENST00000296871.4	CSF2	ENSG00000164400	colony stimulating factor 2 Source HGNC Symbol Acc HGNC 2434
B04	UPFH1132794	ENST00000225474.6	CSF3	ENSG00000108342	colony stimulating factor 3 Source HGNC Symbol Acc HGNC 2438
B05	UPFH0097734	ENST00000396183.7	CTNNB1	ENSG00000168036	catenin beta 1 Source HGNC Symbol Acc HGNC 2514
B06	UPFH1132380	ENST00000503392.1	EGF	ENSG00000138798	epidermal growth factor Source HGNC Symbol Acc HGNC 3229
B07	UPFH0535657	ENST00000344849.4	ENG	ENSG00000106991	endoglin Source HGNC Symbol Acc HGNC 3349
B08	UPFH1132388	ENST00000541774.5	ERBB2	ENSG00000141736	erb-b2 receptor tyrosine kinase 2 Source HGNC Symbol Acc HGNC 3430
B09	UPFH0363315	ENST00000264664.4	FGF10	ENSG00000070193	fibroblast growth factor 10 Source HGNC Symbol Acc HGNC 3666
B10	UPFH0613093	ENST00000264498.7	FGF2	ENSG00000138685	fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676
B11	UPFH0367012	ENST00000310160.7	FUT1	ENSG00000174951	fucosyltransferase 1 (H blood group) Source HGNC Symbol Acc HGNC 4012
B12	UPFH0596402	ENST00000358752.3	FUT4	ENSG00000196371	fucosyltransferase 4 Source HGNC Symbol Acc HGNC 4015
C01	UPFH0444740	ENST00000344575.4	FZD9	ENSG00000188763	frizzled class receptor 9 Source HGNC Symbol Acc HGNC 4047
C02	UPFH0532752	ENST00000597765.1	GDF15	ENSG00000130513	growth differentiation factor 15 Source HGNC Symbol Acc HGNC 30142
C03	UPFH1132419	ENST00000374372.1	GDF5	ENSG00000125965	growth differentiation factor 5 Source HGNC Symbol Acc HGNC 4220
C04	UPFH1132420	ENST00000287020.7	GDF6	ENSG00000156466	growth differentiation factor 6 Source HGNC Symbol Acc HGNC 4221
C05	UPFH1132421	ENST00000272224.5	GDF7	ENSG00000143869	growth differentiation factor 7 Source HGNC Symbol Acc HGNC 4222
C06	UPFH0303642	ENST00000438571.5	GTF3A	ENSG00000122034	general transcription factor IIIA Source HGNC Symbol Acc HGNC 4662
C07	UPFH0343734	ENST00000412731.5	HAT1	ENSG00000128708	histone acetyltransferase 1 Source HGNC Symbol Acc HGNC 4821
C08	UPFH1132434	ENST00000373548.8	HDAC1	ENSG00000116478	histone deacetylase 1 Source HGNC Symbol Acc HGNC 4852
C09	UPFH1132871	ENST00000643024.1	HGF	ENSG00000019991	hepatocyte growth factor Source HGNC Symbol Acc HGNC 4893
C10	UPFH0335369	ENST00000400024.6	HNF1A	ENSG00000135100	HNF1 homeobox A Source HGNC Symbol Acc HGNC 11621
		ENST00000264		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH1132462	832.8	ICAM1	090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
C12	UPFH1132473	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
D01	UPFH0229443	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
D02	UPFH0028177	ENST00000423557.1	IL10	ENSG00000136634	interleukin 10 Source HGNC Symbol Acc HGNC 5962
D03	UPFH0163764	ENST00000263341.6	IL1B	ENSG00000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
D04	UPFH1172910	ENST00000258743.10	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D05	UPFH1132488	ENST00000381330.4	INS	ENSG00000254647	insulin Source HGNC Symbol Acc HGNC 6081
D06	UPFH0124444	ENST00000264107.11	ITGA6	ENSG00000091409	integrin subunit alpha 6 Source HGNC Symbol Acc HGNC 6142
D07	UPFH1132816	ENST00000261023.8	ITGAV	ENSG00000138448	integrin subunit alpha V Source HGNC Symbol Acc HGNC 6150
D08	UPFH0136150	ENST00000562522.2	ITGAX	ENSG00000140678	integrin subunit alpha X Source HGNC Symbol Acc HGNC 6152
D09	UPFH1132498	ENST00000423113.5	ITGB1	ENSG00000150093	integrin subunit beta 1 Source HGNC Symbol Acc HGNC 6153
D10	UPFH0500277	ENST00000254958.10	JAG1	ENSG00000101384	jagged 1 Source HGNC Symbol Acc HGNC 6188
D11	UPFH0515603	ENST00000263754.5	KAT2B	ENSG00000114166	lysine acetyltransferase 2B Source HGNC Symbol Acc HGNC 8638
D12	UPFH0596732	ENST00000263923.5	KDR	ENSG00000128052	kinase insert domain receptor Source HGNC Symbol Acc HGNC 6307
E01	UPFH0242107	ENST00000644744.1	KITLG	ENSG00000049130	KIT ligand Source HGNC Symbol Acc HGNC 6343
E02	UPFH1132822	ENST00000249075.4	LIF	ENSG00000128342	LIF, interleukin 6 family cytokine Source HGNC Symbol Acc HGNC 6596
E03	UPFH1124023	ENST00000534522.5		ENSG00000076706	melanoma cell adhesion molecule Source NCBI gene Acc 4162
E04	UPFH1132551	ENST00000437642.6	MMP2	ENSG00000087245	matrix metalloproteinase 2 Source HGNC Symbol Acc HGNC 7166
E05	UPFH0001264	ENST00000368223.4	NES	ENSG00000132688	nestin Source HGNC Symbol Acc HGNC 7756
E06	UPFH0277610	ENST00000172229.8	NGFR	ENSG00000064300	nerve growth factor receptor Source HGNC Symbol Acc HGNC 7809
E07	UPFH0543837	ENST00000277541.7	NOTCH1	ENSG00000148400	notch 1 Source HGNC Symbol Acc HGNC 7881
E08	UPFH0577262	ENST00000416334.5	NT5E	ENSG00000135318	5 -nucleotidase ecto Source HGNC Symbol Acc HGNC 8021
E09	UPFH0028979	ENST00000512116.5	NUDT6	ENSG00000170917	nudix hydrolase 6 Source HGNC Symbol Acc HGNC 8053
E10	UPFH1132610	ENST00000261799.9	PDGFRB	ENSG00000113721	platelet derived growth factor receptor beta Source HGNC Symbol Acc HGNC 8804
E11	UPFH0036612	ENST00000584080.5	PIGS	ENSG00000087111	phosphatidylinositol glycan anchor biosynthesis class S Source HGNC Symbol Acc HGNC 14937
E12	UPFH1172934	ENST00000441888.7	POU5F1	ENSG00000204531	POU class 5 homeobox 1 Source HGNC Symbol Acc HGNC 9221
F01	UPFH0284890	ENST00000477039.5	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F02	UPFH0346181	ENST00000447510.6	PROM1	ENSG00000007062	prominin 1 Source HGNC Symbol Acc HGNC 9454
F03	UPFH1132643	ENST00000522684.5	PTK2	ENSG00000169398	protein tyrosine kinase 2 Source HGNC Symbol Acc HGNC 9611
F04	UPFH0448301	ENST00000367367.8	PTPRC	ENSG00000081237	protein tyrosine phosphatase, receptor type C Source HGNC Symbol Acc HGNC 9666
F05	UPFH1132657	ENST00000445425.4	RHOA	ENSG00000067560	ras homolog family member A Source HGNC Symbol Acc HGNC 667
F06	UPFH0537167	ENST00000371436.10	RUNX2	ENSG00000124813	runt related transcription factor 2 Source HGNC Symbol Acc HGNC 10472
F07	UPFH0292426	ENST00000481996.1	SLC17A5	ENSG00000119899	solute carrier family 17 member 5 Source HGNC Symbol Acc HGNC 10933
F08	UPFH0151428	ENST00000342988.7	SMAD4	ENSG00000141646	SMAD family member 4 Source HGNC Symbol Acc HGNC 6770
F09	UPFH0346334	ENST00000361125.1	SMURF1	ENSG00000198742	SMAD specific E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 16807
F10	UPFH0189490	ENST00000582081.5	SMURF2	ENSG00000108854	SMAD specific E3 ubiquitin protein ligase 2 Source HGNC Symbol Acc HGNC 16809

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0376428	ENST00000325404.3	SOX2	ENSG00000181449	SRY-box 2 Source HGNC Symbol Acc HGNC 11195
F12	UPFH0392206	ENST00000245479.3	SOX9	ENSG00000125398	SRY-box 9 Source HGNC Symbol Acc HGNC 11204
G01	UPFH0452979	ENST00000552726.1	TBX5	ENSG00000089225	T-box 5 Source HGNC Symbol Acc HGNC 11604
G02	UPFH0248987	ENST00000310581.9	TERT	ENSG00000164362	telomerase reverse transcriptase Source HGNC Symbol Acc HGNC 11730
G03	UPFH0193430	ENST00000221930.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G04	UPFH0000256	ENST00000238682.7	TGFB3	ENSG00000119699	transforming growth factor beta 3 Source HGNC Symbol Acc HGNC 11769
G05	UPFH0329064	ENST00000528295.5	THY1	ENSG00000154096	Thy-1 cell surface antigen Source HGNC Symbol Acc HGNC 11801
G06	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G07	UPFH1132856	ENST00000294728.7	VCAM1	ENSG00000162692	vascular cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 12663
G08	UPFH0281656	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
G09	UPFH1132857	ENST00000544301.7	VIM	ENSG00000026025	vimentin Source HGNC Symbol Acc HGNC 12692
G10	UPFH0533670	ENST00000261405.9	VWF	ENSG00000110799	von Willebrand factor Source HGNC Symbol Acc HGNC 12726
G11	UPFH0486867	ENST00000284523.2	WNT3A	ENSG00000154342	Wnt family member 3A Source HGNC Symbol Acc HGNC 15983
G12	UPFH0538154	ENST00000326866.5	ZFP42	ENSG00000179059	ZFP42 zinc finger protein Source HGNC Symbol Acc HGNC 30949
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.