

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

## Human Cancer Stem Cells

Cat. no. 249955 UPHS-176ZA

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	ABCB5	ABCG2	ALCAM	ALDH1A1	ATM	ATXN1	AXL	BMI1	BMP7	CD24	CD34	CD38
B	CD44	CHEK1	DACH1	DDR1	DKK1	DLL1	DLL4	DNMT1	EGF	ENG	EPCAM	ERBB2
C	ETFA	FGFR2	FLOT2	FOXA2	FOXP1	FZD7	GATA3	GSK3B	HDAC1	ID1	IKKB	CXCL8
D	ITGA2	ITGA4	ITGA6	ITGB1	JAG1	JAK2	KIT	KITLG	KLF17	KLF4	LATS1	LIN28A
E	LIN28B	MAML1	MERTK	MS4A1	MUC1	MYC	MYCN	NANOG	NFKB1	NOS2	NOTCH1	NOTCH2
F	PECAM1	PLAT	PLAUR	POU5F1	PROM1	PTCH1	PTPRC	SAV1	SIRT1	SMO	SNAI1	SOX2
G	STAT3	TAZ	TGFBR1	THY1	TWIST1	TWIST2	WEE1	WNT1	WWC1	YAP1	ZEB1	ZEB2
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	UPFH0418174	ENST00000443026.6	ABC5	ENSG00000004846	ATP binding cassette subfamily B member 5 Source HGNC Symbol Acc HGNC 46
A02	UPFH0026485	ENST00000650821.1	ABCG2	ENSG00000118777	ATP binding cassette subfamily G member 2 (Junior blood group) Source HGNC Symbol Acc HGNC 74
A03	UPFH0482520	ENST00000486979.6	ALCAM	ENSG00000170017	activated leukocyte cell adhesion molecule Source HGNC Symbol Acc HGNC 400
A04	UPFH0409683	ENST00000482210.5	ALDH1A1	ENSG00000165092	aldehyde dehydrogenase 1 family member A1 Source HGNC Symbol Acc HGNC 402
A05	UPFH1132252	ENST00000527805.5	ATM	ENSG00000149311	ATM serine/threonine kinase Source HGNC Symbol Acc HGNC 795
A06	UPFH0152389	ENST00000483591.6	ATXN1	ENSG00000124788	ataxin 1 Source HGNC Symbol Acc HGNC 10548
A07	UPFH0225581	ENST00000594880.1	AXL	ENSG00000167601	AXL receptor tyrosine kinase Source HGNC Symbol Acc HGNC 905
A08	UPFH0503163	ENST00000602358.5	BMI1	ENSG00000168283	BMI1 proto-oncogene, polycomb ring finger Source HGNC Symbol Acc HGNC 1066
A09	UPFH1132781	ENST00000433911.1	BMP7	ENSG00000101144	bone morphogenetic protein 7 Source HGNC Symbol Acc HGNC 1074
A10	UPFH0043318	ENST00000615659.1	CD24	ENSG00000272398	CD24 molecule Source HGNC Symbol Acc HGNC 1645
A11	UPFH0464651	ENST00000367036.7	CD34	ENSG00000174059	CD34 molecule Source HGNC Symbol Acc HGNC 1662
A12	UPFH0266004	ENST00000506191.1	CD38	ENSG00000004468	CD38 molecule Source HGNC Symbol Acc HGNC 1667
B01	UPFH0253499	ENST00000428726.7	CD44	ENSG00000026508	CD44 molecule (Indian blood group) Source HGNC Symbol Acc HGNC 1681
B02	UPFH1132313	ENST00000427383.6	CHEK1	ENSG00000149554	checkpoint kinase 1 Source HGNC Symbol Acc HGNC 1925
B03	UPFH0589039	ENST00000613252.5	DACH1	ENSG00000276644	dachshund family transcription factor 1 Source HGNC Symbol Acc HGNC 2663
B04	UPFH0054949	ENST00000503670.5	DDR1	ENSG00000204580	discoidin domain receptor tyrosine kinase 1 Source HGNC Symbol Acc HGNC 2730
B05	UPFH1132868	ENST00000373970.4	DKK1	ENSG00000107984	dickkopf WNT signaling pathway inhibitor 1 Source HGNC Symbol Acc HGNC 2891
B06	UPFH0541475	ENST00000630500.1	DLL1	ENSG00000198719	delta like canonical Notch ligand 1 Source HGNC Symbol Acc HGNC 2908
B07	UPFH0526209	ENST00000249749.7	DLL4	ENSG00000128917	delta like canonical Notch ligand 4 Source HGNC Symbol Acc HGNC 2910
B08	UPFH1132365	ENST00000359526.9	DNMT1	ENSG00000130816	DNA methyltransferase 1 Source HGNC Symbol Acc HGNC 2976
B09	UPFH1132380	ENST00000503392.1	EGF	ENSG00000138798	epidermal growth factor Source HGNC Symbol Acc HGNC 3229
B10	UPFH0535657	ENST00000344849.4	ENG	ENSG00000106991	endoglin Source HGNC Symbol Acc HGNC 3349
B11	UPFH0451571	ENST00000490733.1	EPCAM	ENSG00000119888	epithelial cell adhesion molecule Source HGNC Symbol Acc HGNC 11529
B12	UPFH1132388	ENST00000541774.5	ERBB2	ENSG00000141736	erb-b2 receptor tyrosine kinase 2 Source HGNC Symbol Acc HGNC 3430
C01	UPFH0393606	ENST00000433983.6	ETFA	ENSG00000140374	electron transfer flavoprotein subunit alpha Source HGNC Symbol Acc HGNC 3481
C02	UPFH0529346	ENST00000604236.5	FGFR2	ENSG00000066468	fibroblast growth factor receptor 2 Source HGNC Symbol Acc HGNC 3689
C03	UPFH0266353	ENST00000581509.1	FLOT2	ENSG00000132589	flotillin 2 Source HGNC Symbol Acc HGNC 3758
C04	UPFH0135307	ENST00000419308.6	FOXA2	ENSG00000125798	forkhead box A2 Source HGNC Symbol Acc HGNC 5022
C05	UPFH0272801	ENST00000649513.1	FOXP1	ENSG00000114861	forkhead box P1 Source HGNC Symbol Acc HGNC 3823
C06	UPFH0485950	ENST00000286201.2	FZD7	ENSG00000155760	frizzled class receptor 7 Source HGNC Symbol Acc HGNC 4045
C07	UPFH1132416	ENST00000645492.1	GATA3	ENSG00000107485	GATA binding protein 3 Source HGNC Symbol Acc HGNC 4172
C08	UPFH0470775	ENST00000316626.5	GSK3B	ENSG00000082701	glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617
C09	UPFH1132434	ENST00000373548.8	HDAC1	ENSG00000116478	histone deacetylase 1 Source HGNC Symbol Acc HGNC 4852
C10	UPFH1132463	ENST00000376112.4	ID1	ENSG00000125968	inhibitor of DNA binding 1, HLH protein Source HGNC Symbol Acc HGNC 5360
		ENST00000649		ENSG000000	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0596293	612.2	IKKBK	104365	Acc HGNC 5960
C12	UPFH0120553	ENST00000307407.8	CXCL8	ENSG00000169429	C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025
D01	UPFH1132496	ENST00000296585.10	ITGA2	ENSG00000164171	integrin subunit alpha 2 Source HGNC Symbol Acc HGNC 6137
D02	UPFH1132815	ENST00000397033.7	ITGA4	ENSG00000115232	integrin subunit alpha 4 Source HGNC Symbol Acc HGNC 6140
D03	UPFH0124444	ENST00000264107.11	ITGA6	ENSG00000091409	integrin subunit alpha 6 Source HGNC Symbol Acc HGNC 6142
D04	UPFH1132498	ENST00000423113.5	ITGB1	ENSG00000150093	integrin subunit beta 1 Source HGNC Symbol Acc HGNC 6153
D05	UPFH0500277	ENST00000254958.10	JAG1	ENSG00000101384	jagged 1 Source HGNC Symbol Acc HGNC 6188
D06	UPFH1132818	ENST00000381652.3	JAK2	ENSG00000096968	Janus kinase 2 Source HGNC Symbol Acc HGNC 6192
D07	UPFH0545239	ENST00000288135.5	KIT	ENSG00000157404	KIT proto-oncogene receptor tyrosine kinase Source HGNC Symbol Acc HGNC 6342
D08	UPFH0242107	ENST00000644744.1	KITLG	ENSG00000049130	KIT ligand Source HGNC Symbol Acc HGNC 6343
D09	UPFH0190848	ENST00000476802.1	KLF17	ENSG00000171872	Kruppel like factor 17 Source HGNC Symbol Acc HGNC 18830
D10	UPFH0017730	ENST00000374672.5	KLF4	ENSG00000136826	Kruppel like factor 4 Source HGNC Symbol Acc HGNC 6348
D11	UPFH0410954	ENST00000542747.5	LATS1	ENSG00000131023	large tumor suppressor kinase 1 Source HGNC Symbol Acc HGNC 6514
D12	UPFH0090369	ENST00000326279.11	LIN28A	ENSG00000131914	lin-28 homolog A Source HGNC Symbol Acc HGNC 15986
E01	UPFH0376767	ENST00000637759.1	LIN28B	ENSG00000187772	lin-28 homolog B Source HGNC Symbol Acc HGNC 32207
E02	UPFH0071259	ENST00000507385.1	MAML1	ENSG00000161021	mastermind like transcriptional coactivator 1 Source HGNC Symbol Acc HGNC 13632
E03	UPFH0056872	ENST00000295408.8	MERTK	ENSG00000153208	MER proto-oncogene, tyrosine kinase Source HGNC Symbol Acc HGNC 7027
E04	UPFH0464870	ENST00000532073.5	MS4A1	ENSG00000156738	membrane spanning 4-domains A1 Source HGNC Symbol Acc HGNC 7315
E05	UPFH0433185	ENST00000368393.7	MUC1	ENSG00000185499	mucin 1, cell surface associated Source HGNC Symbol Acc HGNC 7508
E06	UPFH1132563	ENST00000517291.1	MYC	ENSG00000136997	MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553
E07	UPFH0096659	ENST00000281043.4	MYCN	ENSG00000134323	MYCN proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7559
E08	UPFH1172932	ENST00000541267.5	NANOG	ENSG00000111704	Nanog homeobox Source HGNC Symbol Acc HGNC 20857
E09	UPFH1132828	ENST00000226574.9	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E10	UPFH0572128	ENST00000313735.10	NOS2	ENSG00000007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
E11	UPFH0543837	ENST00000277541.7	NOTCH1	ENSG00000148400	notch 1 Source HGNC Symbol Acc HGNC 7881
E12	UPFH0591047	ENST00000640021.1	NOTCH2	ENSG00000134250	notch 2 Source HGNC Symbol Acc HGNC 7882
F01	UPFH1132613	ENST00000563924.6	PECAM1	ENSG00000261371	platelet and endothelial cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 8823
F02	UPFH1132830	ENST00000352041.7	PLAT	ENSG00000104368	plasminogen activator, tissue type Source HGNC Symbol Acc HGNC 9051
F03	UPFH0152071	ENST00000601723.5	PLAUR	ENSG00000011422	plasminogen activator, urokinase receptor Source HGNC Symbol Acc HGNC 9053
F04	UPFH1172934	ENST00000441888.7	POU5F1	ENSG00000204531	POU class 5 homeobox 1 Source HGNC Symbol Acc HGNC 9221
F05	UPFH0346181	ENST00000447510.6	PROM1	ENSG00000007062	prominin 1 Source HGNC Symbol Acc HGNC 9454
F06	UPFH0155270	ENST00000331920.10	PTCH1	ENSG00000185920	patched 1 Source HGNC Symbol Acc HGNC 9585
F07	UPFH0448301	ENST00000367367.8	PTPRC	ENSG00000081237	protein tyrosine phosphatase, receptor type C Source HGNC Symbol Acc HGNC 9666
F08	UPFH0519147	ENST00000557458.1	SAV1	ENSG00000151748	salvador family WW domain containing protein 1 Source HGNC Symbol Acc HGNC 17795
F09	UPFH0388476	ENST00000212015.11	SIRT1	ENSG00000096717	sirtuin 1 Source HGNC Symbol Acc HGNC 14929
F10	UPFH0104215	ENST00000462420.2	SMO	ENSG00000128602	smoothed, frizzled class receptor Source HGNC Symbol Acc HGNC 11119

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132841	ENST00000244050.3	SNAI1	ENSG00000124216	snail family transcriptional repressor 1 Source HGNC Symbol Acc HGNC 11128
F12	UPFH0376428	ENST00000325404.3	SOX2	ENSG00000181449	SRY-box 2 Source HGNC Symbol Acc HGNC 11195
G01	UPFH0531262	ENST00000404395.3	STAT3	ENSG00000168610	signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364
G02	UPFH0013162	ENST00000617701.5	TAZ	ENSG00000102125	tafazzin Source HGNC Symbol Acc HGNC 11577
G03	UPFH1132719	ENST00000374990.6	TGFBR1	ENSG00000106799	transforming growth factor beta receptor 1 Source HGNC Symbol Acc HGNC 11772
G04	UPFH0329064	ENST00000528295.5	THY1	ENSG00000154096	Thy-1 cell surface antigen Source HGNC Symbol Acc HGNC 11801
G05	UPFH1132743	ENST00000242261.6	TWIST1	ENSG00000122691	twist family bHLH transcription factor 1 Source HGNC Symbol Acc HGNC 12428
G06	UPFH0369814	ENST00000448943.2	TWIST2	ENSG00000233608	twist family bHLH transcription factor 2 Source HGNC Symbol Acc HGNC 20670
G07	UPFH1132757	ENST00000450114.7	WEE1	ENSG00000166483	WEE1 G2 checkpoint kinase Source HGNC Symbol Acc HGNC 12761
G08	UPFH0344484	ENST00000293549.3	WNT1	ENSG00000125084	Wnt family member 1 Source HGNC Symbol Acc HGNC 12774
G09	UPFH0162934	ENST00000524228.5	WWC1	ENSG00000113645	WW and C2 domain containing 1 Source HGNC Symbol Acc HGNC 29435
G10	UPFH0175061	ENST00000282441.10	YAP1	ENSG00000137693	Yes associated protein 1 Source HGNC Symbol Acc HGNC 16262
G11	UPFH0549854	ENST00000437844.6	ZEB1	ENSG00000148516	zinc finger E-box binding homeobox 1 Source HGNC Symbol Acc HGNC 11642
G12	UPFH1132769	ENST00000409487.7	ZEB2	ENSG00000169554	zinc finger E-box binding homeobox 2 Source HGNC Symbol Acc HGNC 14881
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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