

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

## Rat Mesenchymal Stem Cells

Cat. no. 249955 UPRN-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
<b>A</b>	Abcb1a	Acta2	Adipoq	Alcam	Anpep	Anxa5	Bdnf	Bglap	Bmp2	Bmp4	Bmp6	Bmp7
<b>B</b>	Casp3	Cd44	Col1a1	Csf2	Csf3	Clnnb1	Egf	Eng	ErbB2	Fgf10	Fgf2	Fu1
<b>C</b>	Fu4	Fzd9	Gdf15	Gdf5	Gdf6	Gdf7	Hat1	Hdac1	Hgf	Hnf1a	Icam1	Ifng
<b>D</b>	Igf1	Il10	Il1b	Il6	Ins2	Ilg6	Ilgav	Ilgax	Ilgb1	Jag1	Kdr	Kitlg
<b>E</b>	Lif	Mcam	Mif	Mmp2	Nes	Ngfr	Notch1	Nt5e	Nudt6	Pdgfrb	Pigs	Pou5f1
<b>F</b>	Pparg	Prom1	Plk2	Ptprc	Smurf1	Rhoa	Runx2	Slc17a5	Smad4	Smurf2	Sox2	Sox9
<b>G</b>	Tbx5	Tert	Tgfb1	Tgfb3	Thy1	LOC1036943 80	Vcam1	Vegfa	Vim	Vwf	Wnt3a	AABR0702582 5.1
<b>H</b>	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1045141	ENSRNOT00000037712.5	Abcb1a	ENSRNOG0000008012	ATP binding cassette subfamily B member 4 Source RGD Symbol Acc 620248
A02	UPFR1115786	ENSRNOT00000083468.1	Acta2	ENSRNOG0000058039	actin, alpha 2, smooth muscle, aorta Source RGD Symbol Acc 621676
A03	UPFR1094195	ENSRNOT00000089988.1	Adipoq	ENSRNOG0000001821	adiponectin, C1Q and collagen domain containing Source RGD Symbol Acc 628748
A04	UPFR1107215	ENSRNOT00000002738.5	Alcam	ENSRNOG0000001989	activated leukocyte cell adhesion molecule Source RGD Symbol Acc 619972
A05	UPFR1016919	ENSRNOT00000020002.5	Anpep	ENSRNOG0000014610	alanyl aminopeptidase, membrane Source RGD Symbol Acc 2991
A06	UPFR1079810	ENSRNOT00000019554.6	Anxa5	ENSRNOG0000014453	annexin A5 Source RGD Symbol Acc 2120
A07	UPFR1014257	ENSRNOT00000078543.1	Bdnf	ENSRNOG0000047466	brain-derived neurotrophic factor Source RGD Symbol Acc 2202
A08	UPFR1053867	ENSRNOT00000026530.3	Bglap	ENSRNOG0000019607	bone gamma-carboxylglutamate protein Source RGD Symbol Acc 2206
A09	UPFR1023820	ENSRNOT00000028904.4	Bmp2	ENSRNOG0000021276	bone morphogenetic protein 2 Source RGD Symbol Acc 2211
A10	UPFR1013450	ENSRNOT00000083268.1	Bmp4	ENSRNOG0000009694	bone morphogenetic protein 4 Source RGD Symbol Acc 2213
A11	UPFR1048825	ENSRNOT00000018359.7	Bmp6	ENSRNOG0000013717	bone morphogenetic protein 6 Source RGD Symbol Acc 2214
A12	UPFR1105126	ENSRNOT00000084990.1	Bmp7	ENSRNOG0000053384	bone morphogenetic protein 7 Source RGD Symbol Acc 620743
B01	UPFR1091664	ENSRNOT00000014095.5	Casp3	ENSRNOG0000010475	caspase 3 Source RGD Symbol Acc 2275
B02	UPFR1040363	ENSRNOT00000009073.7	Cd44	ENSRNOG0000006094	CD44 molecule (Indian blood group) Source RGD Symbol Acc 2307
B03	UPFR1053469	ENSRNOT00000005311.6	Col1a1	ENSRNOG0000003897	collagen type I alpha 1 chain Source RGD Symbol Acc 61817
B04	UPFR1084630	ENSRNOT00000032333.3	Csf2	ENSRNOG0000026805	colony stimulating factor 2 Source RGD Symbol Acc 621065
B05	UPFR1037448	ENSRNOT00000011509.3	Csf3	ENSRNOG0000008525	colony stimulating factor 3 Source RGD Symbol Acc 2426
B06	UPFR1057605	ENSRNOT00000079085.1	Cttnb1	ENSRNOG0000054172	catenin beta 1 Source RGD Symbol Acc 70487
B07	UPFR1045222	ENSRNOT00000087007.1	Egf	ENSRNOG0000053979	epidermal growth factor Source RGD Symbol Acc 2542
B08	UPFR1081956	ENSRNOT00000071801.2	Eng	ENSRNOG0000050190	endoglin Source RGD Symbol Acc 1593188
B09	UPFR1024636	ENSRNOT00000009114.7	ErbB2	ENSRNOG0000006450	erb-b2 receptor tyrosine kinase 2 Source RGD Symbol Acc 2561
B10	UPFR1048435	ENSRNOT00000016485.3	Fgf10	ENSRNOG0000012278	fibroblast growth factor 10 Source RGD Symbol Acc 2606
B11	UPFR1033121	ENSRNOT00000023388.5	Fgf2	ENSRNOG0000017392	fibroblast growth factor 2 Source RGD Symbol Acc 2609
B12	UPFR1025935	ENSRNOT00000028494.3	Fut1	ENSRNOG0000020995	fucosyltransferase 1 Source RGD Symbol Acc 2638
C01	UPFR1020439	ENSRNOT00000012176.3	Fut4	ENSRNOG0000009157	fucosyltransferase 4 Source RGD Symbol Acc 619954
C02	UPFR1109683	ENSRNOT00000001973.3	Fzd9	ENSRNOG0000001452	frizzled class receptor 9 Source RGD Symbol Acc 628817
C03	UPFR1099357	ENSRNOT00000026652.3	Gdf15	ENSRNOG0000019661	growth differentiation factor 15 Source RGD Symbol Acc 2674
C04	UPFR1064525	ENSRNOT00000073736.3	Gdf5	ENSRNOG0000050123	growth differentiation factor 5 Source RGD Symbol Acc 620102
C05	UPFR1076862	ENSRNOT00000010266.5	Gdf6	ENSRNOG0000007810	growth differentiation factor 6 Source RGD Symbol Acc 620104
C06	UPFR1061846	ENSRNOT00000007928.5	Gdf7	ENSRNOG0000006046	growth differentiation factor 7 Source RGD Symbol Acc 620105
C07	UPFR1035337	ENSRNOT00000002085.6	Hat1	ENSRNOG0000001524	histone acetyltransferase 1 Source RGD Symbol Acc 1305716
C08	UPFR1113247	ENSRNOT00000012854.6	Hdac1	ENSRNOG0000009568	histone deacetylase 1 Source RGD Symbol Acc 1309799
C09	UPFR1076642	ENSRNOT00000009763.5	Hgf	ENSRNOG0000007027	hepatocyte growth factor Source RGD Symbol Acc 2794
C10	UPFR1042992	ENSRNOT00000001565.3	Hnf1a	ENSRNOG0000001183	HNF1 homeobox A Source RGD Symbol Acc 3828
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1031281	028066.5	Icam1	000020679	intercellular adhesion molecule 1 Source RGD Symbol Acc 2857
C12	UPFR1084134	ENSRNOT0000009919.2	Iifng	ENSRNOG0000007468	interferon gamma Source RGD Symbol Acc 2866
D01	UPFR1050099	ENSRNOT00000038780.6	Igf1	ENSRNOG0000004517	insulin-like growth factor 1 Source RGD Symbol Acc 2868
D02	UPFR1113235	ENSRNOT00000006246.5	Il10	ENSRNOG0000004647	interleukin 10 Source RGD Symbol Acc 2886
D03	UPFR1121351	ENSRNOT00000006308.4	Il1b	ENSRNOG0000004649	interleukin 1 beta Source RGD Symbol Acc 2891
D04	UPFR1098910	ENSRNOT00000013732.6	Il6	ENSRNOG0000010278	interleukin 6 Source RGD Symbol Acc 2901
D05	UPFR1114751	ENSRNOT00000027656.3	Ins2	ENSRNOG0000020405	insulin 2 Source RGD Symbol Acc 2916
D06	UPFR1020634	ENSRNOT00000002075.4	Itga6	ENSRNOG0000001518	integrin subunit alpha 6 Source RGD Symbol Acc 621633
D07	UPFR1097241	ENSRNOT00000006961.7	Itgav	ENSRNOG0000004912	integrin subunit alpha V Source RGD Symbol Acc 1310613
D08	UPFR1013587	ENSRNOT00000054983.4	Itgax	ENSRNOG0000036703	integrin subunit alpha X Source RGD Symbol Acc 1561123
D09	UPFR1091655	ENSRNOT00000014785.5	Itgb1	ENSRNOG0000010966	integrin subunit beta 1 Source RGD Symbol Acc 2927
D10	UPFR1082062	ENSRNOT00000010638.7	Jag1	ENSRNOG0000007443	jagged 1 Source RGD Symbol Acc 2937
D11	UPFR1041145	ENSRNOT00000085089.1	Kdr	ENSRNOG0000046829	kinase insert domain receptor Source RGD Symbol Acc 2965
D12	UPFR1087511	ENSRNOT00000085097.1	Kitlg	ENSRNOG0000005386	KIT ligand Source RGD Symbol Acc 3086
E01	UPFR1017798	ENSRNOT00000009313.4	Lif	ENSRNOG0000007002	LIF, interleukin 6 family cytokine Source RGD Symbol Acc 620865
E02	UPFR1070184	ENSRNOT00000010463.6	Mcam	ENSRNOG0000007726	melanoma cell adhesion molecule Source RGD Symbol Acc 620463
E03	UPFR1057784	ENSRNOT00000083127.1	Miff	ENSRNOG0000008658	melanocyte inducing transcription factor Source RGD Symbol Acc 3092
E04	UPFR1080151	ENSRNOT00000022679.6	Mmp2	ENSRNOG0000016695	matrix metalloproteinase 2 Source RGD Symbol Acc 621316
E05	UPFR1037546	ENSRNOT00000025314.3	Nes	ENSRNOG0000018681	nestin Source RGD Symbol Acc 3162
E06	UPFR1048810	ENSRNOT00000007268.3	Ngfr	ENSRNOG0000005392	nerve growth factor receptor Source RGD Symbol Acc 3177
E07	UPFR1044597	ENSRNOT00000026212.7	Notch1	ENSRNOG0000019322	notch 1 Source RGD Symbol Acc 3187
E08	UPFR1092421	ENSRNOT00000015057.6	Nt5e	ENSRNOG0000011071	5 nucleotidase, ecto Source RGD Symbol Acc 61956
E09	UPFR1025139	ENSRNOT00000084825.1	Nudt6	ENSRNOG0000017420	nudix hydrolase 6 Source RGD Symbol Acc 621356
E10	UPFR1052705	ENSRNOT00000086033.1	Pdgfrb	ENSRNOG0000018461	platelet derived growth factor receptor beta Source RGD Symbol Acc 3285
E11	UPFR1072706	ENSRNOT00000015207.5	Pigs	ENSRNOG0000011366	phosphatidylinositol glycan anchor biosynthesis, class S Source RGD Symbol Acc 1359436
E12	UPFR1099582	ENSRNOT00000072288.2	Pou5f1	ENSRNOG0000046487	POU class 5 homeobox 1 Source RGD Symbol Acc 1359491
F01	UPFR1091351	ENSRNOT00000051858.5	Pparg	ENSRNOG0000008839	peroxisome proliferator-activated receptor gamma Source RGD Symbol Acc 3371
F02	UPFR1037260	ENSRNOT00000004231.6	Prom1	ENSRNOG0000003098	prominin 1 Source RGD Symbol Acc 69367
F03	UPFR1115915	ENSRNOT00000011219.6	Ptk2	ENSRNOG0000007916	protein tyrosine kinase 2 Source RGD Symbol Acc 3443
F04	UPFR1047359	ENSRNOT00000064785.3	Ptprc	ENSRNOG0000000655	protein tyrosine phosphatase, receptor type, C Source RGD Symbol Acc 3451
F05	UPFR1020568	ENSRNOT00000082989.1	Smurf1	ENSRNOG0000000999	SMAD specific E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1594738
F06	UPFR1119707	ENSRNOT00000071664.2	Rhoa	ENSRNOG0000050519	ras homolog family member A Source RGD Symbol Acc 619921
F07	UPFR1051266	ENSRNOT00000061014.4	Runx2	ENSRNOG0000020193	runt-related transcription factor 2 Source RGD Symbol Acc 2282
F08	UPFR1017919	ENSRNOT00000012474.6	Slc17a5	ENSRNOG0000009330	solute carrier family 17 member 5 Source RGD Symbol Acc 1311388
F09	UPFR1022605	ENSRNOT00000082484.1	Smad4	ENSRNOG0000051965	SMAD family member 4 Source RGD Symbol Acc 3033
F10	UPFR1060690	ENSRNOT00000019781.6	Smurf2	ENSRNOG0000014623	SMAD specific E3 ubiquitin protein ligase 2 Source RGD Symbol Acc 1310067

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1042145	ENSRNOT00000016236.3	Sox2	ENSRNOG0000012199	SRY box 2 Source RGD Symbol Acc 1565646
F12	UPFR1013060	ENSRNOT00000003511.6	Sox9	ENSRNOG0000002607	SRY box 9 Source RGD Symbol Acc 620474
G01	UPFR1017591	ENSRNOT00000001893.5	Tbx5	ENSRNOG0000001399	T-box 5 Source RGD Symbol Acc 1305702
G02	UPFR1102859	ENSRNOT00000022683.4	Tert	ENSRNOG0000025327	telomerase reverse transcriptase Source RGD Symbol Acc 70494
G03	UPFR1103881	ENSRNOT00000028051.4	Tgfb1	ENSRNOG0000020652	transforming growth factor, beta 1 Source RGD Symbol Acc 69051
G04	UPFR1030751	ENSRNOT00000013516.5	Tgfb3	ENSRNOG0000009867	transforming growth factor, beta 3 Source RGD Symbol Acc 3851
G05	UPFR1024110	ENSRNOT00000008685.3	Thy1	ENSRNOG0000006604	Thy-1 cell surface antigen Source RGD Symbol Acc 3860
G06	UPFR1098022	ENSRNOT00000079677.1	LOC103694380	ENSRNOG0000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G07	UPFR1101375	ENSRNOT00000019377.5	Vcam1	ENSRNOG0000014333	vascular cell adhesion molecule 1 Source RGD Symbol Acc 3952
G08	UPFR1117908	ENSRNOT00000026559.5	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
G09	UPFR1091277	ENSRNOT00000024430.5	Vim	ENSRNOG0000018087	vimentin Source RGD Symbol Acc 621646
G10	UPFR1092436	ENSRNOT00000026643.7	Vwf	ENSRNOG0000019689	von Willebrand factor Source RGD Symbol Acc 621759
G11	UPFR1043063	ENSRNOT00000064505.3	Wnt3a	ENSRNOG0000003039	Wnt family member 3A Source RGD Symbol Acc 1308057
G12	UPFR1075845	ENSRNOT00000048104.4	AABR07025825.1	ENSRNOG0000032977	
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	UPFR1126610	UPL_RGDC	RGDC	UPL_RGDC	Rat 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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