

# QuantiNova® LNA® Probe PCR Focus Panels (Rotor-Gene® Format)

## Mouse Cancer Stem Cells

Cat. no. 249955 UPMM-176ZR

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 (Rotor-Gene): QuantiNova LNA Probe PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. 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	Abxn1	Axl	Bmi1	Bmp7	Cd24a	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	Ikbb	Itga2
D	Itga4	Itga6	Itgb1	Jag1	Jack2	Kit	Kitl	Klf17	Klf4	Lats1	Lin28a	Lin28b
E	Maml1	Merk	Ms4a1	Muc1	Myc	Mycn	Nanog	Nrk1	Nos2	Notch1	Notch2	Pecam1
F	Plat	Plaur	Pou5f1	Prom1	Ptch1	Ptprc	Sav1	Sirt1	Smo	Snai1	Snai2	Sox2
G	Stat3	Taz	Tgfb1	Thy1	Twist1	Twist2	Wee1	Wnt1	Wwc1	Yap1	Zeb1	Zeb2
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM062571 0	ENSMUST00000 100982.4	Abcb5	ENSMUSG00 000072791	ATP-binding cassette, sub-family B (MDR/TAP), member 5 Source MGI Symbol Acc MGI 1924956
A02	UPFM086112 9	ENSMUST00000 147213.7	Abcg2	ENSMUSG00 000029802	ATP binding cassette subfamily G member 2 (Junior blood group) Source MGI Symbol Acc MGI 1347061
A03	UPFM062114 8	ENSMUST00000 164888.1	Alcam	ENSMUSG00 000022636	activated leukocyte cell adhesion molecule Source MGI Symbol Acc MGI 1313266
A04	UPFM077566 5	ENSMUST00000 225337.2	Aldh1a1	ENSMUSG00 000053279	aldehyde dehydrogenase family 1, subfamily A1 Source MGI Symbol Acc MGI 1353450
A05	UPFM070877 3	ENSMUST00000 150244.1	Atm	ENSMUSG00 000034218	ataxia telangiectasia mutated Source MGI Symbol Acc MGI 107202
A06	UPFM070683 3	ENSMUST00000 222943.1	Atn1	ENSMUSG00 000046876	ataxin 1 Source MGI Symbol Acc MGI 104783
A07	UPFM093901 1	ENSMUST00000 002677.10	Axl	ENSMUSG00 000002602	AXL receptor tyrosine kinase Source MGI Symbol Acc MGI 1347244
A08	UPFM079385 6	ENSMUST00000 051929.12	Bmi1	ENSMUSG00 000026739	Bmi1 polycomb ring finger oncogene Source MGI Symbol Acc MGI 88174
A09	UPFM093035 6	ENSMUST00000 009143.7	Bmp7	ENSMUSG00 000008999	bone morphogenetic protein 7 Source MGI Symbol Acc MGI 103302
A10	UPFM082206 2	ENSMUST00000 214476.1	Cd24a	ENSMUSG00 000047139	CD24a antigen Source MGI Symbol Acc MGI 88323
A11	UPFM096481 0	ENSMUST00000 194036.1	Cd34	ENSMUSG00 000016494	CD34 antigen Source MGI Symbol Acc MGI 88329
A12	UPFM074494 4	ENSMUST00000 030964.5	Cd38	ENSMUSG00 000029084	CD38 antigen Source MGI Symbol Acc MGI 107474
B01	UPFM095220 9	ENSMUST00000 111192.2	Cd44	ENSMUSG00 000005087	CD44 antigen Source MGI Symbol Acc MGI 88338
B02	UPFM098368 4	ENSMUST00000 174105.7	Chek1	ENSMUSG00 000032113	checkpoint kinase 1 Source MGI Symbol Acc MGI 1202065
B03	UPFM083452 2	ENSMUST00000 069334.7	Dach1	ENSMUSG00 000055639	dachshund family transcription factor 1 Source MGI Symbol Acc MGI 1277991
B04	UPFM078166 5	ENSMUST00000 003628.12	Ddr1	ENSMUSG00 000003534	discoidin domain receptor family, member 1 Source MGI Symbol Acc MGI 99216
B05	UPFM100823 0	ENSMUST00000 025803.8	Dkk1	ENSMUSG00 000024868	dickkopf WNT signaling pathway inhibitor 1 Source MGI Symbol Acc MGI 1329040
B06	UPFM084775 6	ENSMUST00000 129395.7	Dll1	ENSMUSG00 000014773	delta like canonical Notch ligand 1 Source MGI Symbol Acc MGI 104659
B07	UPFM098729 3	ENSMUST00000 127102.1	Dll4	ENSMUSG00 000027314	delta like canonical Notch ligand 4 Source MGI Symbol Acc MGI 1859388
B08	UPFM079807 4	ENSMUST00000 178110.2	Dnmt1	ENSMUSG00 000004099	DNA methyltransferase (cytosine-5) 1 Source MGI Symbol Acc MGI 94912
B09	UPFM092572 5	ENSMUST00000 199615.4	Egf	ENSMUSG00 000028017	epidermal growth factor Source MGI Symbol Acc MGI 95290
B10	UPFM062460 8	ENSMUST00000 009705.13	Eng	ENSMUSG00 000026814	endoglin Source MGI Symbol Acc MGI 95392
B11	UPFM084457 5	ENSMUST00000 053577.8	Epcam	ENSMUSG00 000045394	epithelial cell adhesion molecule Source MGI Symbol Acc MGI 106653
B12	UPFM099508 8	ENSMUST00000 136032.1	ErbB2	ENSMUSG00 000062312	erb-b2 receptor tyrosine kinase 2 Source MGI Symbol Acc MGI 95410
C01	UPFM085223 7	ENSMUST00000 153186.7	EtfA	ENSMUSG00 000032314	electron transferring flavoprotein, alpha polypeptide Source MGI Symbol Acc MGI 106092
C02	UPFM065842 4	ENSMUST00000 117089.7	Fgfr2	ENSMUSG00 000030849	fibroblast growth factor receptor 2 Source MGI Symbol Acc MGI 95523
C03	UPFM089460 2	ENSMUST00000 148162.8	Flot2	ENSMUSG00 000061981	flotillin 2 Source MGI Symbol Acc MGI 103309
C04	UPFM066808 0	ENSMUST00000 109964.7	Foxa2	ENSMUSG00 000037025	forkhead box A2 Source MGI Symbol Acc MGI 1347476
C05	UPFM082967 5	ENSMUST00000 113329.9	Foxp1	ENSMUSG00 000030067	forkhead box P1 Source MGI Symbol Acc MGI 1914004
C06	UPFM068124 6	ENSMUST00000 114246.3	Fzd7	ENSMUSG00 000041075	frizzled class receptor 7 Source MGI Symbol Acc MGI 108570
C07	UPFM070391 0	ENSMUST00000 151456.1	Gata3	ENSMUSG00 000015619	GATA binding protein 3 Source MGI Symbol Acc MGI 95663
C08	UPFM098687 7	ENSMUST00000 114750.1	Gsk3b	ENSMUSG00 000022812	glycogen synthase kinase 3 beta Source MGI Symbol Acc MGI 1861437
C09	UPFM093590 7	ENSMUST00000 125718.7	Hdac1	ENSMUSG00 000028800	histone deacetylase 1 Source MGI Symbol Acc MGI 108086
C10	UPFM085834 2	ENSMUST00000 109824.1	Id1	ENSMUSG00 000042745	inhibitor of DNA binding 1 Source MGI Symbol Acc MGI 96396
	UPFM086154	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	146212.7	lkbkb	000031537	inhibitor of kappaB kinase beta Source MGI Symbol Acc MGI 1338071
C12	UPFM099288 8	ENSMUST00000 224204.1	Itga2	ENSMUSG00 000015533	integrin alpha 2 Source MGI Symbol Acc MGI 96600
D01	UPFM078320 0	ENSMUST00000 099972.4	Itga4	ENSMUSG00 000027009	integrin alpha 4 Source MGI Symbol Acc MGI 96603
D02	UPFM074510 5	ENSMUST00000 133124.7	Itga6	ENSMUSG00 000027111	integrin alpha 6 Source MGI Symbol Acc MGI 96605
D03	UPFM093465 6	ENSMUST00000 124826.1	Itgb1	ENSMUSG00 000025809	integrin beta 1 (fibronectin receptor beta) Source MGI Symbol Acc MGI 96610
D04	UPFM083362 5	ENSMUST00000 028735.7	Jag1	ENSMUSG00 000027276	jagged 1 Source MGI Symbol Acc MGI 1095416
D05	UPFM074831 3	ENSMUST00000 065796.9	Jak2	ENSMUSG00 000024789	Janus kinase 2 Source MGI Symbol Acc MGI 96629
D06	UPFM098121 2	ENSMUST00000 143221.1	Kit	ENSMUSG00 000005672	KIT proto-oncogene receptor tyrosine kinase Source MGI Symbol Acc MGI 96677
D07	UPFM094688 5	ENSMUST00000 105283.8	Kitl	ENSMUSG00 000019966	kit ligand Source MGI Symbol Acc MGI 96974
D08	UPFM072791 7	ENSMUST00000 062747.5	Klf17	ENSMUSG00 000048626	Kruppel-like factor 17 Source MGI Symbol Acc MGI 2181068
D09	UPFM077094 3	ENSMUST00000 107619.2	Klf4	ENSMUSG00 000003032	Kruppel-like factor 4 (gut) Source MGI Symbol Acc MGI 1342287
D10	UPFM085225 3	ENSMUST00000 165952.8	Lats1	ENSMUSG00 000040021	large tumor suppressor Source MGI Symbol Acc MGI 1333883
D11	UPFM090224 1	ENSMUST00000 176113.7	Lin28a	ENSMUSG00 000050966	lin-28 homolog A (C. elegans) Source MGI Symbol Acc MGI 1890546
D12	UPFM077207 1	ENSMUST00000 079390.6	Lin28b	ENSMUSG00 000063804	lin-28 homolog B (C. elegans) Source MGI Symbol Acc MGI 3584032
E01	UPFM080443 8	ENSMUST00000 135868.7	Maml1	ENSMUSG00 000050567	mastermind like transcriptional coactivator 1 Source MGI Symbol Acc MGI 1890504
E02	UPFM062168 6	ENSMUST00000 140221.1	Mertk	ENSMUSG00 000014361	MER proto-oncogene tyrosine kinase Source MGI Symbol Acc MGI 96965
E03	UPFM072700 1	ENSMUST00000 169159.2	Ms4a1	ENSMUSG00 000024673	membrane-spanning 4-domains, subfamily A, member 1 Source MGI Symbol Acc MGI 88321
E04	UPFM073058 5	ENSMUST00000 041142.3	Muc1	ENSMUSG00 000042784	mucin 1, transmembrane Source MGI Symbol Acc MGI 97231
E05	UPFM081421 4	ENSMUST00000 161976.7	Myc	ENSMUSG00 000022346	myelocytomatosis oncogene Source MGI Symbol Acc MGI 97250
E06	UPFM088156 2	ENSMUST00000 043396.14	Mycn	ENSMUSG00 000037169	v-myc avian myelocytomatosis viral related oncogene, neuroblastoma derived Source MGI Symbol Acc MGI 97357
E07	UPFM094958 9	ENSMUST00000 112581.7	Nanog	ENSMUSG00 000012396	Nanog homeobox Source MGI Symbol Acc MGI 1919200
E08	UPFM098758 7	ENSMUST00000 029812.13	Nfkb1	ENSMUSG00 000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
E09	UPFM076964 2	ENSMUST00000 208783.1	Nos2	ENSMUSG00 000020826	nitric oxide synthase 2, inducible Source MGI Symbol Acc MGI 97361
E10	UPFM079598 7	ENSMUST00000 126872.7	Notch1	ENSMUSG00 000026923	notch 1 Source MGI Symbol Acc MGI 97363
E11	UPFM093566 5	ENSMUST00000 079812.7	Notch2	ENSMUSG00 000027878	notch 2 Source MGI Symbol Acc MGI 97364
E12	UPFM095037 6	ENSMUST00000 068021.8	Pecam1	ENSMUSG00 000020717	platelet/endothelial cell adhesion molecule 1 Source MGI Symbol Acc MGI 97537
F01	UPFM093204 7	ENSMUST00000 033941.6	Plat	ENSMUSG00 000031538	plasminogen activator, tissue Source MGI Symbol Acc MGI 97610
F02	UPFM091889 6	ENSMUST00000 206636.1	Plaur	ENSMUSG00 000046223	plasminogen activator, urokinase receptor Source MGI Symbol Acc MGI 97612
F03	UPFM093822 6	ENSMUST00000 025271.16	Pou5f1	ENSMUSG00 000024406	POU domain, class 5, transcription factor 1 Source MGI Symbol Acc MGI 101893
F04	UPFM073166 3	ENSMUST00000 196853.1	Prom1	ENSMUSG00 000029086	prominin 1 Source MGI Symbol Acc MGI 1100886
F05	UPFM074012 1	ENSMUST00000 194663.5	Ptch1	ENSMUSG00 000021466	patched 1 Source MGI Symbol Acc MGI 105373
F06	UPFM080782 6	ENSMUST00000 112036.4	Ptprc	ENSMUSG00 000026395	protein tyrosine phosphatase, receptor type, C Source MGI Symbol Acc MGI 97810
F07	UPFM068173 4	ENSMUST00000 220735.1	Sav1	ENSMUSG00 000021067	salvador family WW domain containing 1 Source MGI Symbol Acc MGI 1927144
F08	UPFM091465 7	ENSMUST00000 177694.7	Sirt1	ENSMUSG00 000020063	sirtuin 1 Source MGI Symbol Acc MGI 2135607
F09	UPFM100963 4	ENSMUST00000 001812.4	Smo	ENSMUSG00 000001761	smoothened, frizzled class receptor Source MGI Symbol Acc MGI 108075
F10	UPFM082086 9	ENSMUST00000 052631.7	Snai1	ENSMUSG00 000042821	snail family zinc finger 1 Source MGI Symbol Acc MGI 98330

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM072669 0	ENSMUST00000 023356.7	Snai2	ENSMUSG00 000022676	snail family zinc finger 2 Source MGI Symbol Acc MGI 1096393
F12	UPFM080676 7	ENSMUST00000 099151.5	Sox2	ENSMUSG00 000074637	SRY (sex determining region Y)-box 2 Source MGI Symbol Acc MGI 98364
G01	UPFM098484 5	ENSMUST00000 092671.11	Stat3	ENSMUSG00 000004040	signal transducer and activator of transcription 3 Source MGI Symbol Acc MGI 103038
G02	UPFM082027 4	ENSMUST00000 147844.8	Taz	ENSMUSG00 000009995	tafazzin Source MGI Symbol Acc MGI 109626
G03	UPFM064002 0	ENSMUST00000 044234.13	Tgfr1	ENSMUSG00 000007613	transforming growth factor, beta receptor I Source MGI Symbol Acc MGI 98728
G04	UPFM101144 2	ENSMUST00000 215156.1	Thy1	ENSMUSG00 000032011	thymus cell antigen 1, theta Source MGI Symbol Acc MGI 98747
G05	UPFM089781 8	ENSMUST00000 049089.6	Twist1	ENSMUSG00 000035799	twist basic helix-loop-helix transcription factor 1 Source MGI Symbol Acc MGI 98872
G06	UPFM068807 4	ENSMUST00000 186075.1	Twist2	ENSMUSG00 000007805	twist basic helix-loop-helix transcription factor 2 Source MGI Symbol Acc MGI 104685
G07	UPFM069624 3	ENSMUST00000 033326.9	Wee1	ENSMUSG00 000031016	WEE 1 homolog 1 (S. pombe) Source MGI Symbol Acc MGI 103075
G08	UPFM069215 7	ENSMUST00000 023734.7	Wnt1	ENSMUSG00 000022997	wingless-type MMTV integration site family, member 1 Source MGI Symbol Acc MGI 98953
G09	UPFM097104 4	ENSMUST00000 018993.6	Wwc1	ENSMUSG00 000018849	WW, C2 and coiled-coil domain containing 1 Source MGI Symbol Acc MGI 2388637
G10	UPFM100930 3	ENSMUST00000 174604.7	Yap1	ENSMUSG00 000053110	yes-associated protein 1 Source MGI Symbol Acc MGI 103262
G11	UPFM087689 4	ENSMUST00000 162892.7	Zeb1	ENSMUSG00 000024238	zinc finger E-box binding homeobox 1 Source MGI Symbol Acc MGI 1344313
G12	UPFM090205 5	ENSMUST00000 176438.8	Zeb2	ENSMUSG00 000026872	zinc finger E-box binding homeobox 2 Source MGI Symbol Acc MGI 1344407
H01	UPFM113294 6	ENSMUST00000 163829.1	Actb	ENSMUSG00 000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM113294 7	ENSMUST00000 102476.4	B2m	ENSMUSG00 000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM113294 8	ENSMUST00000 117757.8	Gapdh	ENSMUSG00 000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM113294 9	ENSMUST00000 026613.13	Gusb	ENSMUSG00 000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM113295 0	ENSMUST00000 166469.7	Hsp90ab1	ENSMUSG00 000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM112660 9	UPL_MGDC	MGDC	UPL_MGDC	Mouse 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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