

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

## Mouse Epithelial to Mesenchymal Transition (EMT)

Cat. no. 249955 UPMM-090ZR

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
<b>A</b>	Ahnak	Akt1	Bmp1	Bmp7	Cald1	Comk2n1	Cav2	Cdh1	Cdh2	Col1a2	Col3a1	Col5a2
<b>B</b>	Clnnb1	Dsc2	Dsp	Egfr	Erb3	Esr1	F11r	Fgfbp1	Fn1	Foxc2	Fzd7	Gng11
<b>C</b>	Gsc	Gsk3b	Igf1bp4	Il1rn	Ilk	Ilg5	Ilgav	Ilgb1	Jag1	Krt14	Krt19	Krt7
<b>D</b>	Mif	Mmp2	Mmp3	Mmp9	Msn	Mst1r	Map1b	Nodal	Notch1	Nudt13	Ocln	Pdgfrb
<b>E</b>	Plek2	Desi1	Plk2	Ptp4a1	Rac1	Rgs2	Serpine1	Gemin2	Smad2	Snai1	Snai2	Snai3
<b>F</b>	Sox10	Sparc	Spp1	Stat3	Steap1	Tcf4	Tcf7l1	Tfp2	Tgfb1	Tgfb2	Tgfb3	Timp1
<b>G</b>	Tmeff1	Tmem132a	Tspan13	Twist1	Vcan	Vim	Vps13a	Wnt11	Wnt5a	Wnt5b	Zeb1	Zeb2
<b>H</b>	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	UPFM071562 5	ENSMUST00000 092955.10	Ahnak	ENSMUSG00 000069833	AHNAK nucleoprotein (desmoyokin) Source MGI Symbol Acc MGI 1316648
A02	UPFM082786 0	ENSMUST00000 139388.2	Akt1	ENSMUSG00 000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A03	UPFM075622 5	ENSMUST00000 227944.1	Bmp1	ENSMUSG00 000022098	bone morphogenetic protein 1 Source MGI Symbol Acc MGI 88176
A04	UPFM093035 6	ENSMUST00000 009143.7	Bmp7	ENSMUSG00 000008999	bone morphogenetic protein 7 Source MGI Symbol Acc MGI 103302
A05	UPFM064924 9	ENSMUST00000 115026.7	Cald1	ENSMUSG00 000029761	caldesmon 1 Source MGI Symbol Acc MGI 88250
A06	UPFM074453 9	ENSMUST00000 050918.3	Camk2n1	ENSMUSG00 000046447	calcium/calmodulin-dependent protein kinase II inhibitor 1 Source MGI Symbol Acc MGI 1913509
A07	UPFM070600 8	ENSMUST00000 000058.6	Cav2	ENSMUSG00 000000058	caveolin 2 Source MGI Symbol Acc MGI 107571
A08	UPFM088317 7	ENSMUST00000 136580.1	Cdh1	ENSMUSG00 000000303	cadherin 1 Source MGI Symbol Acc MGI 88354
A09	UPFM069274 2	ENSMUST00000 025166.13	Cdh2	ENSMUSG00 000024304	cadherin 2 Source MGI Symbol Acc MGI 88355
A10	UPFM081902 3	ENSMUST00000 132029.1	Col1a2	ENSMUSG00 000029661	collagen, type I, alpha 2 Source MGI Symbol Acc MGI 88468
A11	UPFM093889 4	ENSMUST00000 087883.12	Col3a1	ENSMUSG00 000026043	collagen, type III, alpha 1 Source MGI Symbol Acc MGI 88453
A12	UPFM069290 7	ENSMUST00000 131535.1	Col5a2	ENSMUSG00 000026042	collagen, type V, alpha 2 Source MGI Symbol Acc MGI 88458
B01	UPFM098586 3	ENSMUST00000 154356.7	Ctnnb1	ENSMUSG00 000006932	catenin (cadherin associated protein), beta 1 Source MGI Symbol Acc MGI 88276
B02	UPFM085394 8	ENSMUST00000 039247.10	Dsc2	ENSMUSG00 000024331	desmocollin 2 Source MGI Symbol Acc MGI 103221
B03	UPFM092854 2	ENSMUST00000 124830.2	Dsp	ENSMUSG00 000054889	desmoplakin Source MGI Symbol Acc MGI 109611
B04	UPFM080878 1	ENSMUST00000 125984.1	Egfr	ENSMUSG00 000020122	epidermal growth factor receptor Source MGI Symbol Acc MGI 95294
B05	UPFM086306 1	ENSMUST00000 082059.6	ErbB3	ENSMUSG00 000018166	erb-b2 receptor tyrosine kinase 3 Source MGI Symbol Acc MGI 95411
B06	UPFM083226 3	ENSMUST00000 105590.7	Esr1	ENSMUSG00 000019768	estrogen receptor 1 (alpha) Source MGI Symbol Acc MGI 1352467
B07	UPFM088158 3	ENSMUST00000 043839.4	F11r	ENSMUSG00 000038235	F11 receptor Source MGI Symbol Acc MGI 1321398
B08	UPFM099630 6	ENSMUST00000 061299.8	Fgfbp1	ENSMUSG00 000048373	fibroblast growth factor binding protein 1 Source MGI Symbol Acc MGI 1096350
B09	UPFM086511 0	ENSMUST00000 188894.6	Fn1	ENSMUSG00 000026193	fibronectin 1 Source MGI Symbol Acc MGI 95566
B10	UPFM070963 5	ENSMUST00000 054691.7	Foxc2	ENSMUSG00 000046714	forkhead box C2 Source MGI Symbol Acc MGI 1347481
B11	UPFM068124 6	ENSMUST00000 114246.3	Fzd7	ENSMUSG00 000041075	frizzled class receptor 7 Source MGI Symbol Acc MGI 108570
B12	UPFM081473 3	ENSMUST00000 031670.9	Gng11	ENSMUSG00 000032766	guanine nucleotide binding protein (G protein), gamma 11 Source MGI Symbol Acc MGI 1913316
C01	UPFM093480 2	ENSMUST00000 021513.5	Gsc	ENSMUSG00 000021095	goosecoid homeobox Source MGI Symbol Acc MGI 95841
C02	UPFM098687 7	ENSMUST00000 114750.1	Gsk3b	ENSMUSG00 000022812	glycogen synthase kinase 3 beta Source MGI Symbol Acc MGI 1861437
C03	UPFM067796 0	ENSMUST00000 177092.7	Igfbp4	ENSMUSG00 000017493	insulin-like growth factor binding protein 4 Source MGI Symbol Acc MGI 96439
C04	UPFM079938 9	ENSMUST00000 114485.8	Il1rn	ENSMUSG00 000026981	interleukin 1 receptor antagonist Source MGI Symbol Acc MGI 96547
C05	UPFM073967 8	ENSMUST00000 149695.7	Ilk	ENSMUSG00 000030890	integrin linked kinase Source MGI Symbol Acc MGI 1195267
C06	UPFM078839 0	ENSMUST00000 215331.1	Itga5	ENSMUSG00 000005555	integrin alpha 5 (fibronectin receptor alpha) Source MGI Symbol Acc MGI 96604
C07	UPFM085524 7	ENSMUST00000 028499.10	Itgav	ENSMUSG00 000027087	integrin alpha V Source MGI Symbol Acc MGI 96608
C08	UPFM093465 6	ENSMUST00000 124826.1	Itgb1	ENSMUSG00 000025809	integrin beta 1 (fibronectin receptor beta) Source MGI Symbol Acc MGI 96610
C09	UPFM083362 5	ENSMUST00000 028735.7	Jag1	ENSMUSG00 000027276	jagged 1 Source MGI Symbol Acc MGI 1095416
C10	UPFM073270 5	ENSMUST00000 007272.7	Krt14	ENSMUSG00 000045545	keratin 14 Source MGI Symbol Acc MGI 96688
	UPFM100132	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	007317.7	Krt19	000020911	keratin 19 Source MGI Symbol Acc MGI 96693
C12	UPFM091992 6	ENSMUST00000 068904.8	Krt7	ENSMUSG00 000023039	keratin 7 Source MGI Symbol Acc MGI 96704
D01	UPFM083297 3	ENSMUST00000 139462.1	Mif	ENSMUSG00 000035158	melanogenesis associated transcription factor Source MGI Symbol Acc MGI 104554
D02	UPFM073737 4	ENSMUST00000 211567.1	Mmp2	ENSMUSG00 000031740	matrix metalloproteinase 2 Source MGI Symbol Acc MGI 97009
D03	UPFM079125 8	ENSMUST00000 034497.7	Mmp3	ENSMUSG00 000043613	matrix metalloproteinase 3 Source MGI Symbol Acc MGI 97010
D04	UPFM079930 8	ENSMUST00000 017881.2	Mmp9	ENSMUSG00 000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
D05	UPFM062307 8	ENSMUST00000 149985.7	Msn	ENSMUSG00 000031207	moesin Source MGI Symbol Acc MGI 97167
D06	UPFM077388 5	ENSMUST00000 195113.1	Mst1r	ENSMUSG00 000032584	macrophage stimulating 1 receptor (c-met-related tyrosine kinase) Source MGI Symbol Acc MGI 99614
D07	UPFM066109 6	ENSMUST00000 224702.1	Map1b	ENSMUSG00 000052727	microtubule-associated protein 1B Source MGI Symbol Acc MGI 1306778
D08	UPFM079984 2	ENSMUST00000 049339.6	Nodal	ENSMUSG00 000037171	nodal Source MGI Symbol Acc MGI 97359
D09	UPFM079598 7	ENSMUST00000 126872.7	Notch1	ENSMUSG00 000026923	notch 1 Source MGI Symbol Acc MGI 97363
D10	UPFM086602 4	ENSMUST00000 224066.1	Nudt13	ENSMUSG00 000021809	nudix (nucleoside diphosphate linked moiety X)-type motif 13 Source MGI Symbol Acc MGI 1914975
D11	UPFM087486 1	ENSMUST00000 069756.10	Ocln	ENSMUSG00 000021638	occludin Source MGI Symbol Acc MGI 106183
D12	UPFM083084 0	ENSMUST00000 115274.1	Pdgfrb	ENSMUSG00 000024620	platelet derived growth factor receptor, beta polypeptide Source MGI Symbol Acc MGI 97531
E01	UPFM070162 6	ENSMUST00000 021544.7	Plek2	ENSMUSG00 000021118	pleckstrin 2 Source MGI Symbol Acc MGI 1351466
E02	UPFM093400 9	ENSMUST00000 129039.7	Desi1	ENSMUSG00 000022472	desumoylating isopeptidase 1 Source MGI Symbol Acc MGI 106313
E03	UPFM085603 9	ENSMUST00000 226466.1	Ptk2	ENSMUSG00 000022607	PTK2 protein tyrosine kinase 2 Source MGI Symbol Acc MGI 95481
E04	UPFM069863 2	ENSMUST00000 076587.5	Ptp4a1	ENSMUSG00 000117310	protein tyrosine phosphatase 4a1 Source NCBI gene Acc 19243
E05	UPFM096241 9	ENSMUST00000 131513.1	Rac1	ENSMUSG00 000001847	Rac family small GTPase 1 Source MGI Symbol Acc MGI 97845
E06	UPFM080625 9	ENSMUST00000 127206.7	Rgs2	ENSMUSG00 000026360	regulator of G-protein signaling 2 Source MGI Symbol Acc MGI 1098271
E07	UPFM070788 6	ENSMUST00000 041388.10	Serpine1	ENSMUSG00 000037411	serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608
E08	UPFM099414 4	ENSMUST00000 182710.1	Gemin2	ENSMUSG00 000060121	gem nuclear organelle associated protein 2 Source MGI Symbol Acc MGI 1913853
E09	UPFM077443 3	ENSMUST00000 172198.7	Smad2	ENSMUSG00 000024563	SMAD family member 2 Source MGI Symbol Acc MGI 108051
E10	UPFM082086 9	ENSMUST00000 052631.7	Snai1	ENSMUSG00 000042821	snail family zinc finger 1 Source MGI Symbol Acc MGI 98330
E11	UPFM072669 0	ENSMUST00000 023356.7	Snai2	ENSMUSG00 000022676	snail family zinc finger 2 Source MGI Symbol Acc MGI 1096393
E12	UPFM082182 6	ENSMUST00000 006762.6	Snai3	ENSMUSG00 000006587	snail family zinc finger 3 Source MGI Symbol Acc MGI 1353563
F01	UPFM062654 2	ENSMUST00000 230532.1	Sox10	ENSMUSG00 000033006	SRY (sex determining region Y)-box 10 Source MGI Symbol Acc MGI 98358
F02	UPFM087131 6	ENSMUST00000 214685.1	Sparc	ENSMUSG00 000018593	secreted acidic cysteine rich glycoprotein Source MGI Symbol Acc MGI 98373
F03	UPFM075924 9	ENSMUST00000 112746.7	Spp1	ENSMUSG00 000029304	secreted phosphoprotein 1 Source MGI Symbol Acc MGI 98389
F04	UPFM098484 5	ENSMUST00000 092671.11	Stat3	ENSMUSG00 000004040	signal transducer and activator of transcription 3 Source MGI Symbol Acc MGI 103038
F05	UPFM083204 9	ENSMUST00000 015796.8	Steap1	ENSMUSG00 000015652	six transmembrane epithelial antigen of the prostate 1 Source MGI Symbol Acc MGI 1917608
F06	UPFM087881 4	ENSMUST00000 201157.1	Tcf4	ENSMUSG00 000053477	transcription factor 4 Source MGI Symbol Acc MGI 98506
F07	UPFM063094 0	ENSMUST00000 114053.8	Tcf7l1	ENSMUSG00 000055799	transcription factor 7 like 1 (T cell specific, HMG box) Source MGI Symbol Acc MGI 1202876
F08	UPFM077426 4	ENSMUST00000 203257.1	Tfpi2	ENSMUSG00 000029664	tissue factor pathway inhibitor 2 Source MGI Symbol Acc MGI 108543
F09	UPFM066688 0	ENSMUST00000 171757.1	Tgfb1	ENSMUSG00 000002603	transforming growth factor, beta 1 Source MGI Symbol Acc MGI 98725
F10	UPFM073116 6	ENSMUST00000 045288.13	Tgfb2	ENSMUSG00 000039239	transforming growth factor, beta 2 Source MGI Symbol Acc MGI 98726

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM086737 6	ENSMUST00000 003687.7	Tgfb3	ENSMUSG00 000021253	transforming growth factor, beta 3 Source MGI Symbol Acc MGI 98727
F12	UPFM079676 3	ENSMUST00000 009530.4	Timp1	ENSMUSG00 000001131	tissue inhibitor of metalloproteinase 1 Source MGI Symbol Acc MGI 98752
G01	UPFM083926 2	ENSMUST00000 030032.12	Tmeff1	ENSMUSG00 000028347	transmembrane protein with EGF-like and two follistatin-like domains 1 Source MGI Symbol Acc MGI 1926810
G02	UPFM079585 9	ENSMUST00000 120524.1	Tmem132a	ENSMUSG00 000024736	transmembrane protein 132A Source MGI Symbol Acc MGI 2147810
G03	UPFM085116 9	ENSMUST00000 020896.16	Tspan13	ENSMUSG00 000020577	tetraspanin 13 Source MGI Symbol Acc MGI 1913359
G04	UPFM089781 8	ENSMUST00000 049089.6	Twist1	ENSMUSG00 000035799	twist basic helix-loop-helix transcription factor 1 Source MGI Symbol Acc MGI 98872
G05	UPFM092669 5	ENSMUST00000 109544.8	Vcan	ENSMUSG00 000021614	versican Source MGI Symbol Acc MGI 102889
G06	UPFM099766 2	ENSMUST00000 028062.7	Vim	ENSMUSG00 000026728	vimentin Source MGI Symbol Acc MGI 98932
G07	UPFM068114 7	ENSMUST00000 224149.1	Vps13a	ENSMUSG00 000046230	vacuolar protein sorting 13A Source MGI Symbol Acc MGI 2444304
G08	UPFM074653 5	ENSMUST00000 165240.1	Wnt11	ENSMUSG00 000015957	wingless-type MMTV integration site family, member 11 Source MGI Symbol Acc MGI 101948
G09	UPFM099069 5	ENSMUST00000 063465.11	Wnt5a	ENSMUSG00 000021994	wingless-type MMTV integration site family, member 5A Source MGI Symbol Acc MGI 98958
G10	UPFM065525 5	ENSMUST00000 117171.7	Wnt5b	ENSMUSG00 000030170	wingless-type MMTV integration site family, member 5B Source MGI Symbol Acc MGI 98959
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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