

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

## Mouse Tumor Metastasis

Cat. no. 249955 UPMM-028ZR

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	Apc	Brms1	Ccl7	Cd44	Cd82	Cdh1	Cdh11	Cdh6	Cdh8	Cdkn2a	Chd4	Col4a2
B	Csf1	Ctbp1	Ctnna1	Ctsk	Ctsl	Cxcl12	Cxcr2	Cxcr4	Denr	Elane	Ephb2	Etv4
C	Evsr1	Fat1	Fgfr4	Flt4	Fn1	Fxyd5	Gpnm3	Hgf	Hpse	Hras	Httatip2	Igf1
D	Il18	Il1b	Itga7	Itgb3	Kiss1	Kiss1r	Kras	Lpar6	Mcam	Mdm2	Met	Mmp10
E	Mmp11	Mmp13	Mmp2	Mmp3	Mmp7	Mmp9	Mta1	Miss1	Myc	Mycl	Nf2	Nme1
F	Nme2	Nme4	Nr4a3	Plaur	Pnn	Plen	Rb1	Rorb	Rpsa	Set	Smad2	Smad4
G	Src	Sstr2	Syk	Tcf20	Tgfb1	Timp2	Timp3	Timp4	Tnfrsf10	Trp53	Tshr	Vegfa
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	QIC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM082281 4	ENSMUST00000 163295.1	Apc	ENSMUSG00 000005871	APC, WNT signaling pathway regulator Source MGI Symbol Acc MGI 88039
A02	UPFM081398 6	ENSMUST00000 116567.3	Brms1	ENSMUSG00 000080268	breast cancer metastasis-suppressor 1 Source MGI Symbol Acc MGI 2388804
A03	UPFM093687 7	ENSMUST00000 021011.2	Ccl7	ENSMUSG00 000035373	chemokine (C-C motif) ligand 7 Source MGI Symbol Acc MGI 99512
A04	UPFM095220 9	ENSMUST00000 111192.2	Cd44	ENSMUSG00 000005087	CD44 antigen Source MGI Symbol Acc MGI 88338
A05	UPFM076814 5	ENSMUST00000 111257.7	Cd82	ENSMUSG00 000027215	CD82 antigen Source MGI Symbol Acc MGI 104651
A06	UPFM088317 7	ENSMUST00000 136580.1	Cdh1	ENSMUSG00 000000303	cadherin 1 Source MGI Symbol Acc MGI 88354
A07	UPFM068320 8	ENSMUST00000 210578.1	Cdh11	ENSMUSG00 000031673	cadherin 11 Source MGI Symbol Acc MGI 99217
A08	UPFM087761 7	ENSMUST00000 036439.5	Cdh6	ENSMUSG00 000039385	cadherin 6 Source MGI Symbol Acc MGI 107435
A09	UPFM063576 0	ENSMUST00000 145601.7	Cdh8	ENSMUSG00 000036510	cadherin 8 Source MGI Symbol Acc MGI 107434
A10	UPFM070277 6	ENSMUST00000 107131.1	Cdkn2a	ENSMUSG00 000044303	cyclin dependent kinase inhibitor 2A Source MGI Symbol Acc MGI 104738
A11	UPFM070181 3	ENSMUST00000 112392.7	Chd4	ENSMUSG00 000063870	chromodomain helicase DNA binding protein 4 Source MGI Symbol Acc MGI 1344380
A12	UPFM066275 6	ENSMUST00000 146219.1	Col4a2	ENSMUSG00 000031503	collagen, type IV, alpha 2 Source MGI Symbol Acc MGI 88455
B01	UPFM064393 3	ENSMUST00000 155557.1	Csf1	ENSMUSG00 000014599	colony stimulating factor 1 (macrophage) Source MGI Symbol Acc MGI 1339753
B02	UPFM061874 7	ENSMUST00000 201372.2	Ctbp1	ENSMUSG00 000037373	C-terminal binding protein 1 Source MGI Symbol Acc MGI 1201685
B03	UPFM063661 3	ENSMUST00000 238145.1	Ctnna1	ENSMUSG00 000037815	catenin (cadherin associated protein), alpha 1 Source MGI Symbol Acc MGI 88274
B04	UPFM075734 4	ENSMUST00000 015664.4	Ctsk	ENSMUSG00 000028111	cathepsin K Source MGI Symbol Acc MGI 107823
B05	UPFM090433 9	ENSMUST00000 222971.1	Ctsl	ENSMUSG00 000021477	cathepsin L Source MGI Symbol Acc MGI 88564
B06	UPFM084136 8	ENSMUST00000 112871.7	Cxcl12	ENSMUSG00 000061353	chemokine (C-X-C motif) ligand 12 Source MGI Symbol Acc MGI 103556
B07	UPFM096164 0	ENSMUST00000 106899.3	Cxcr2	ENSMUSG00 000026180	chemokine (C-X-C motif) receptor 2 Source MGI Symbol Acc MGI 105303
B08	UPFM077457 5	ENSMUST00000 052172.6	Cxcr4	ENSMUSG00 000045382	chemokine (C-X-C motif) receptor 4 Source MGI Symbol Acc MGI 109563
B09	UPFM067073 3	ENSMUST00000 023869.14	Denr	ENSMUSG00 000023106	density-regulated protein Source MGI Symbol Acc MGI 1915434
B10	UPFM074554 5	ENSMUST00000 046091.6	Elane	ENSMUSG00 000020125	elastase, neutrophil expressed Source MGI Symbol Acc MGI 2679229
B11	UPFM066979 1	ENSMUST00000 105845.8	Ephb2	ENSMUSG00 000028664	Eph receptor B2 Source MGI Symbol Acc MGI 99611
B12	UPFM090543 5	ENSMUST00000 164750.7	Etv4	ENSMUSG00 000017724	ets variant 4 Source MGI Symbol Acc MGI 99423
C01	UPFM080862 9	ENSMUST00000 073308.10	Ewsr1	ENSMUSG00 000009079	Ewing sarcoma breakpoint region 1 Source MGI Symbol Acc MGI 99960
C02	UPFM084349 6	ENSMUST00000 191428.6	Fat1	ENSMUSG00 000070047	FAT atypical cadherin 1 Source MGI Symbol Acc MGI 109168
C03	UPFM093133 4	ENSMUST00000 005452.5	Fgfr4	ENSMUSG00 000005320	fibroblast growth factor receptor 4 Source MGI Symbol Acc MGI 95525
C04	UPFM075026 9	ENSMUST00000 020617.2	Fli4	ENSMUSG00 000020357	FMS-like tyrosine kinase 4 Source MGI Symbol Acc MGI 95561
C05	UPFM086511 0	ENSMUST00000 188894.6	Fn1	ENSMUSG00 000026193	fibronectin 1 Source MGI Symbol Acc MGI 95566
C06	UPFM067517 1	ENSMUST00000 161684.7	Fxyd5	ENSMUSG00 000009687	FXFD domain-containing ion transport regulator 5 Source MGI Symbol Acc MGI 1201785
C07	UPFM087659 0	ENSMUST00000 204260.1	Gpnmb	ENSMUSG00 000029816	glycoprotein (transmembrane) nmb Source MGI Symbol Acc MGI 1934765
C08	UPFM081302 0	ENSMUST00000 199900.1	Hgf	ENSMUSG00 000028864	hepatocyte growth factor Source MGI Symbol Acc MGI 96079
C09	UPFM081199 8	ENSMUST00000 112908.1	Hpse	ENSMUSG00 000035273	heparanase Source MGI Symbol Acc MGI 1343124
C10	UPFM099623 4	ENSMUST00000 124314.2	Hras	ENSMUSG00 000025499	Harvey rat sarcoma virus oncogene Source MGI Symbol Acc MGI 96224
	UPFM088505	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	8	085272.6	Htatip2	000039745	HIV-1 Tat interactive protein 2 Source MGI Symbol Acc MGI 1859271
C12	UPFM0929418	ENSMUST00000121161.7	Igf1	ENSMUSG0000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
D01	UPFM0939430	ENSMUST00000180021.1	Il18	ENSMUSG00000039217	interleukin 18 Source MGI Symbol Acc MGI 107936
D02	UPFM0671281	ENSMUST00000155994.1	Il1b	ENSMUSG00000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
D03	UPFM0660400	ENSMUST00000099112.3	Itga7	ENSMUSG00000025348	integrin alpha 7 Source MGI Symbol Acc MGI 102700
D04	UPFM0799616	ENSMUST00000127140.2	Itgb3	ENSMUSG00000020689	integrin beta 3 Source MGI Symbol Acc MGI 96612
D05	UPFM0894656	ENSMUST00000178033.4	Kiss1	ENSMUSG0000116158	KISS-1 metastasis-suppressor Source MGI Symbol Acc MGI 2663985
D06	UPFM0708974	ENSMUST00000219883.1	Kiss1r	ENSMUSG00000035773	KISS1 receptor Source MGI Symbol Acc MGI 2148793
D07	UPFM1000799	ENSMUST00000032399.11	Kras	ENSMUSG00000030265	Kirsten rat sarcoma viral oncogene homolog Source MGI Symbol Acc MGI 96680
D08	UPFM0800361	ENSMUST00000044405.7	Lpar6	ENSMUSG00000033446	lysophosphatidic acid receptor 6 Source MGI Symbol Acc MGI 1914418
D09	UPFM0951924	ENSMUST00000147836.1	Mcam	ENSMUSG00000032135	melanoma cell adhesion molecule Source MGI Symbol Acc MGI 1933966
D10	UPFM0752195	ENSMUST00000137102.7	Mdm2	ENSMUSG00000020184	transformed mouse 3T3 cell double minute 2 Source MGI Symbol Acc MGI 96952
D11	UPFM0817946	ENSMUST00000115443.7	Met	ENSMUSG00000009376	met proto-oncogene Source MGI Symbol Acc MGI 96969
D12	UPFM0659828	ENSMUST00000034488.3	Mmp10	ENSMUSG00000047562	matrix metalloproteinase 10 Source MGI Symbol Acc MGI 97007
E01	UPFM0826939	ENSMUST00000219728.1	Mmp11	ENSMUSG00000000901	matrix metalloproteinase 11 Source MGI Symbol Acc MGI 97008
E02	UPFM0950865	ENSMUST00000015394.9	Mmp13	ENSMUSG00000050578	matrix metalloproteinase 13 Source MGI Symbol Acc MGI 1340026
E03	UPFM0737374	ENSMUST00000211567.1	Mmp2	ENSMUSG00000031740	matrix metalloproteinase 2 Source MGI Symbol Acc MGI 97009
E04	UPFM0791258	ENSMUST00000034497.7	Mmp3	ENSMUSG00000043613	matrix metalloproteinase 3 Source MGI Symbol Acc MGI 97010
E05	UPFM0900071	ENSMUST00000018767.7	Mmp7	ENSMUSG0000018623	matrix metalloproteinase 7 Source MGI Symbol Acc MGI 103189
E06	UPFM0799308	ENSMUST00000017881.2	Mmp9	ENSMUSG0000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
E07	UPFM0822456	ENSMUST00000109726.7	Mta1	ENSMUSG0000021144	metastasis associated 1 Source MGI Symbol Acc MGI 2150037
E08	UPFM0713257	ENSMUST00000226976.1	Mtss1	ENSMUSG00000022353	metastasis suppressor 1 Source MGI Symbol Acc MGI 2384818
E09	UPFM0814214	ENSMUST00000161976.7	Myc	ENSMUSG00000022346	myelocytomatosis oncogene Source MGI Symbol Acc MGI 97250
E10	UPFM0869774	ENSMUST00000135925.1	Mycl	ENSMUSG0000028654	v-myc avian myelocytomatosis viral oncogene lung carcinoma derived Source MGI Symbol Acc MGI 96799
E11	UPFM1004534	ENSMUST00000109908.7	Nf2	ENSMUSG00000009073	neurofibromin 2 Source MGI Symbol Acc MGI 97307
E12	UPFM0902346	ENSMUST00000135884.7	Nme1	ENSMUSG00000037601	NME/NM23 nucleoside diphosphate kinase 1 Source MGI Symbol Acc MGI 97355
F01	UPFM0985133	ENSMUST00000021217.10	Nme2	ENSMUSG00000020857	NME/NM23 nucleoside diphosphate kinase 2 Source MGI Symbol Acc MGI 97356
F02	UPFM0911823	ENSMUST00000236112.1	Nme4	ENSMUSG00000024177	NME/NM23 nucleoside diphosphate kinase 4 Source MGI Symbol Acc MGI 1931148
F03	UPFM0806324	ENSMUST00000030025.9	Nr4a3	ENSMUSG00000028341	nuclear receptor subfamily 4, group A, member 3 Source MGI Symbol Acc MGI 1352457
F04	UPFM0918896	ENSMUST00000206636.1	Plaur	ENSMUSG00000046223	plasminogen activator, urokinase receptor Source MGI Symbol Acc MGI 97612
F05	UPFM0767286	ENSMUST0000021381.5	Pnn	ENSMUSG00000020994	pinin Source MGI Symbol Acc MGI 1100514
F06	UPFM0897426	ENSMUST00000013807.7	Pten	ENSMUSG0000013663	phosphatase and tensin homolog Source MGI Symbol Acc MGI 109583
F07	UPFM0772788	ENSMUST00000022701.6	Rb1	ENSMUSG00000022105	RB transcriptional corepressor 1 Source MGI Symbol Acc MGI 97874
F08	UPFM1006408	ENSMUST00000112828.7	Rorb	ENSMUSG00000036192	RAR-related orphan receptor beta Source MGI Symbol Acc MGI 1343464
F09	UPFM0737739	ENSMUST00000217356.1	Rpsa	ENSMUSG00000032518	ribosomal protein SA Source MGI Symbol Acc MGI 105381
F10	UPFM0890846	ENSMUST00000137291.1	Set	ENSMUSG00000054766	SET nuclear oncogene Source MGI Symbol Acc MGI 1860267

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM077443 3	ENSMUST00000 172198.7	Smad2	ENSMUSG00 000024563	SMAD family member 2 Source MGI Symbol Acc MGI 108051
F12	UPFM098632 8	ENSMUST00000 114939.1	Smad4	ENSMUSG00 000024515	SMAD family member 4 Source MGI Symbol Acc MGI 894293
G01	UPFM071690 7	ENSMUST00000 109531.7	Src	ENSMUSG00 000027646	Rous sarcoma oncogene Source MGI Symbol Acc MGI 98397
G02	UPFM093389 3	ENSMUST00000 106630.1	Sstr2	ENSMUSG00 000047904	somatostatin receptor 2 Source MGI Symbol Acc MGI 98328
G03	UPFM087743 5	ENSMUST00000 118756.7	Syk	ENSMUSG00 000021457	spleen tyrosine kinase Source MGI Symbol Acc MGI 99515
G04	UPFM095838 9	ENSMUST00000 048966.6	Tcf20	ENSMUSG00 000041852	transcription factor 20 Source MGI Symbol Acc MGI 108399
G05	UPFM066688 0	ENSMUST00000 171757.1	Tgfb1	ENSMUSG00 000002603	transforming growth factor, beta 1 Source MGI Symbol Acc MGI 98725
G06	UPFM073508 3	ENSMUST00000 017610.9	Timp2	ENSMUSG00 000017466	tissue inhibitor of metalloproteinase 2 Source MGI Symbol Acc MGI 98753
G07	UPFM066788 6	ENSMUST00000 020234.13	Timp3	ENSMUSG00 000020044	tissue inhibitor of metalloproteinase 3 Source MGI Symbol Acc MGI 98754
G08	UPFM091836 6	ENSMUST00000 032462.8	Timp4	ENSMUSG00 000030317	tissue inhibitor of metalloproteinase 4 Source MGI Symbol Acc MGI 109125
G09	UPFM068209 9	ENSMUST00000 174840.1	Tnfsf10	ENSMUSG00 000039304	tumor necrosis factor (ligand) superfamily, member 10 Source MGI Symbol Acc MGI 107414
G10	UPFM066913 3	ENSMUST00000 171247.7	Trp53	ENSMUSG00 000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G11	UPFM081617 2	ENSMUST00000 021343.7	Tshr	ENSMUSG00 000020963	thyroid stimulating hormone receptor Source MGI Symbol Acc MGI 98849
G12	UPFM117296 6	ENSMUST00000 214739.1	Vegfa	ENSMUSG00 000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
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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