

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

## Mouse Cell Death PathwayFinder

Cat. no. 249955 UPMM-212ZR

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>	9430015G10 Rik	Abl1	Akt1	Apaf1	App	Atg12	Atg16l1	Atg3	Atg5	Atg7	Atp6v1g2	Box
<b>B</b>	Bcl2	Bcl2a1o	Bcl2l1	Bcl2l11	Becn1	Birc2	Birc3	Bmf	Casp1	Casp2	Casp3	Casp6
<b>C</b>	Casp7	Casp9	Ccdc103	Cd40	Cd40lg	Cflar	Commd4	Ctsb	Cts	Cyld	Defb1	Dendd4a
<b>D</b>	Dffa	Dpysl4	Eif5b	Esr1	Fas	Fasl	Foxl1	Gaa	Gadd45a	Galt5	Grb2	Hspbap1
<b>E</b>	Htt	Ifng	Igf1	Igf1r	Ins2	Irgm1	Jph3	Kenip1	Mag	Map1lc3a	Mapk8	Mcl1
<b>F</b>	Nfkbl	Nol3	Olfrl404	Parp1	Parp2	Pik3c3	Pvr	Rab25	Rps6kb1	S100a7a	Snca	Spota2
<b>G</b>	Sqstm1	Sycp2	Maco1	Tnf	Tnfrsf10b	Tnfrsf11b	Tnfrsf1a	Traf2	Trp53	Txn14b	Ulk1	Xiap
<b>H</b>	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	UPFM0683084	ENSMUST00000141882.1	9430015G10Rik	ENSMUSG0000059939	RIKEN cDNA 9430015G10 gene Source MGI Symbol Acc MGI 2444364
A02	UPFM0893522	ENSMUST00000028190.12	Abl1	ENSMUSG0000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A03	UPFM0827860	ENSMUST00000139388.2	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A04	UPFM0878141	ENSMUST00000160788.1	Apaf1	ENSMUSG0000019979	apoptotic peptidase activating factor 1 Source MGI Symbol Acc MGI 1306796
A05	UPFM0815169	ENSMUST00000227723.1	App	ENSMUSG0000022892	amyloid beta (A4) precursor protein Source MGI Symbol Acc MGI 88059
A06	UPFM0720211	ENSMUST00000035648.5	Atg12	ENSMUSG0000032905	autophagy related 12 Source MGI Symbol Acc MGI 1914776
A07	UPFM0757488	ENSMUST00000127884.1	Atg16l1	ENSMUSG0000026289	autophagy related 16-like 1 ( <i>S. cerevisiae</i> ) Source MGI Symbol Acc MGI 1924290
A08	UPFM0852162	ENSMUST00000023343.3	Atg3	ENSMUSG0000022663	autophagy related 3 Source MGI Symbol Acc MGI 1915091
A09	UPFM0768101	ENSMUST00000039286.4	Atg5	ENSMUSG0000038160	autophagy related 5 Source MGI Symbol Acc MGI 1277186
A10	UPFM0669504	ENSMUST00000032457.16	Atg7	ENSMUSG0000030314	autophagy related 7 Source MGI Symbol Acc MGI 1921494
A11	UPFM0897735	ENSMUST00000130992.1	Atp6v1g2	ENSMUSG0000024403	ATPase, H+ transporting, lysosomal V1 subunit G2 Source MGI Symbol Acc MGI 1913487
A12	UPFM0903861	ENSMUST00000211195.1	Bax	ENSMUSG0000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
B01	UPFM0635853	ENSMUST00000112751.1	Bcl2	ENSMUSG0000057329	B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138
B02	UPFM0639953	ENSMUST00000098485.3	Bcl2a1a	ENSMUSG0000102037	B cell leukemia/lymphoma 2 related protein A1a Source MGI Symbol Acc MGI 102687
B03	UPFM0663411	ENSMUST00000156688.1	Bcl2l1	ENSMUSG0000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
B04	UPFM0880566	ENSMUST00000019281.13	Bcl2l11	ENSMUSG0000027381	BCL2-like 11 (apoptosis facilitator) Source MGI Symbol Acc MGI 1197519
B05	UPFM0832925	ENSMUST00000140706.7	Becn1	ENSMUSG0000035086	beclin 1, autophagy related Source MGI Symbol Acc MGI 1891828
B06	UPFM0723532	ENSMUST00000074246.6	Birc2	ENSMUSG0000057367	baculoviral IAP repeat-containing 2 Source MGI Symbol Acc MGI 1197009
B07	UPFM0707122	ENSMUST00000013949.14	Birc3	ENSMUSG0000032000	baculoviral IAP repeat-containing 3 Source MGI Symbol Acc MGI 1197007
B08	UPFM0855832	ENSMUST00000110859.2	Bmf	ENSMUSG0000040093	BCL2 modifying factor Source MGI Symbol Acc MGI 2176433
B09	UPFM0953748	ENSMUST00000027015.5	Casp1	ENSMUSG0000025888	caspase 1 Source MGI Symbol Acc MGI 96544
B10	UPFM0925980	ENSMUST00000139930.7	Casp2	ENSMUSG0000029863	caspase 2 Source MGI Symbol Acc MGI 97295
B11	UPFM0728951	ENSMUST00000210534.1	Casp3	ENSMUSG0000031628	caspase 3 Source MGI Symbol Acc MGI 107739
B12	UPFM0770215	ENSMUST00000029626.8	Casp6	ENSMUSG0000027997	caspase 6 Source MGI Symbol Acc MGI 1312921
C01	UPFM0630488	ENSMUST00000237055.1	Casp7	ENSMUSG0000025076	caspase 7 Source MGI Symbol Acc MGI 109383
C02	UPFM0693309	ENSMUST00000097805.10	Casp9	ENSMUSG0000028914	caspase 9 Source MGI Symbol Acc MGI 1277950
C03	UPFM0917439	ENSMUST00000021307.9	Ccdc103	ENSMUSG0000020930	coiled-coil domain containing 103 Source MGI Symbol Acc MGI 1920543
C04	UPFM0722157	ENSMUST00000153105.1	Cd40	ENSMUSG0000017652	CD40 antigen Source MGI Symbol Acc MGI 88336
C05	UPFM0918360	ENSMUST00000033466.1	Cd40lg	ENSMUSG0000031132	CD40 ligand Source MGI Symbol Acc MGI 88337
C06	UPFM0824862	ENSMUST00000069333.7	Cflar	ENSMUSG0000026031	CASP8 and FADD-like apoptosis regulator Source MGI Symbol Acc MGI 1336166
C07	UPFM0727783	ENSMUST00000217018.1	Comm4d	ENSMUSG0000032299	COMM domain containing 4 Source MGI Symbol Acc MGI 1913449
C08	UPFM0629026	ENSMUST00000006235.8	Ctsb	ENSMUSG0000021939	cathepsin B Source MGI Symbol Acc MGI 88561
C09	UPFM0673058	ENSMUST00000015667.8	Ctss	ENSMUSG0000038642	cathepsin S Source MGI Symbol Acc MGI 107341
C10	UPFM1012316	ENSMUST00000209532.1	Cyld	ENSMUSG0000036712	CYLD lysine 63 deubiquitinase Source MGI Symbol Acc MGI 1921506
	UPFM062655	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	7	051017.8	Defb1	000044748	defensin beta 1 Source MGI Symbol Acc MGI 1096878
C12	UPFM1000120	ENSMUST00000215025.1	Dennd4a	ENSMUSG0000053641	DENN/MADD domain containing 4A Source MGI Symbol Acc MGI 2142979
D01	UPFM0845298	ENSMUST00000030816.3	Dffa	ENSMUSG0000028974	DNA fragmentation factor, alpha subunit Source MGI Symbol Acc MGI 1196227
D02	UPFM0888052	ENSMUST00000145499.7	Dpysl4	ENSMUSG0000025478	dihydropyrimidinase-like 4 Source MGI Symbol Acc MGI 1349764
D03	UPFM0644149	ENSMUST00000195664.1	Eif5b	ENSMUSG0000026083	eukaryotic translation initiation factor 5B Source MGI Symbol Acc MGI 2441772
D04	UPFM0832263	ENSMUST00000105590.7	Esr1	ENSMUSG0000019768	estrogen receptor 1 (alpha) Source MGI Symbol Acc MGI 1352467
D05	UPFM0995787	ENSMUST00000235709.1	Fas	ENSMUSG0000024778	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
D06	UPFM0749442	ENSMUST00000193648.1	Fasl	ENSMUSG0000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
D07	UPFM0857543	ENSMUST00000060271.2	Foxi1	ENSMUSG0000047861	forkhead box 11 Source MGI Symbol Acc MGI 1096329
D08	UPFM0646374	ENSMUST00000128753.1	Gaa	ENSMUSG0000025579	glucosidase, alpha, acid Source MGI Symbol Acc MGI 95609
D09	UPFM0910954	ENSMUST00000204282.1	Gadd45a	ENSMUSG0000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
D10	UPFM0625092	ENSMUST00000144671.7	Galnt5	ENSMUSG0000026828	polypeptide N-acetylgalactosaminyltransferase 5 Source MGI Symbol Acc MGI 2179403
D11	UPFM0762283	ENSMUST00000135065.1	Grb2	ENSMUSG0000059923	growth factor receptor bound protein 2 Source MGI Symbol Acc MGI 95805
D12	UPFM0843415	ENSMUST00000231579.1	Hspbap1	ENSMUSG0000022849	Hspb associated protein 1 Source MGI Symbol Acc MGI 1913917
E01	UPFM0945011	ENSMUST00000156490.1	Htt	ENSMUSG0000029104	huntingtin Source MGI Symbol Acc MGI 96067
E02	UPFM1172950	ENSMUST00000068592.4	lfng	ENSMUSG0000055170	interferon gamma Source MGI Symbol Acc MGI 107656
E03	UPFM0929418	ENSMUST00000121161.7	Igf1	ENSMUSG0000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
E04	UPFM0653299	ENSMUST00000208871.1	Igf1r	ENSMUSG0000005533	insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433
E05	UPFM1002675	ENSMUST00000210288.1	Ins2	ENSMUSG0000000215	insulin II Source MGI Symbol Acc MGI 96573
E06	UPFM0645021	ENSMUST00000097271.3	Irgm1	ENSMUSG0000046879	immunity-related GTPase family M member 1 Source MGI Symbol Acc MGI 107567
E07	UPFM0740018	ENSMUST00000169735.1	Jph3	ENSMUSG0000025318	junctophilin 3 Source MGI Symbol Acc MGI 1891497
E08	UPFM1010206	ENSMUST00000101368.8	Kcnip1	ENSMUSG0000053519	Kv channel-interacting protein 1 Source MGI Symbol Acc MGI 1917607
E09	UPFM0841297	ENSMUST00000040548.13	Mag	ENSMUSG0000036634	myelin-associated glycoprotein Source MGI Symbol Acc MGI 96912
E10	UPFM0955379	ENSMUST00000029128.3	Map1lc3a	ENSMUSG0000027602	microtubule-associated protein 1 light chain 3 alpha Source MGI Symbol Acc MGI 1915661
E11	UPFM0915657	ENSMUST00000111944.9	Mapk8	ENSMUSG0000021936	mitogen-activated protein kinase 8 Source MGI Symbol Acc MGI 1346861
E12	UPFM0712617	ENSMUST00000178686.1	Mcl1	ENSMUSG0000038612	myeloid cell leukemia sequence 1 Source MGI Symbol Acc MGI 101769
F01	UPFM0987587	ENSMUST00000029812.13	Nfkb1	ENSMUSG0000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
F02	UPFM0826374	ENSMUST00000014920.7	Nol3	ENSMUSG0000014776	nucleolar protein 3 (apoptosis repressor with CARD domain) Source MGI Symbol Acc MGI 1925938
F03	UPFM0838980	ENSMUST00000056592.2	Olf1404	ENSMUSG0000049456	olfactory receptor 1404 Source MGI Symbol Acc MGI 3031238
F04	UPFM0936420	ENSMUST00000193238.1	Parp1	ENSMUSG0000026496	poly (ADP-ribose) polymerase family, member 1 Source MGI Symbol Acc MGI 1340806
F05	UPFM0873584	ENSMUST00000036126.6	Parp2	ENSMUSG0000036023	poly (ADP-ribose) polymerase family, member 2 Source MGI Symbol Acc MGI 1341112
F06	UPFM0911160	ENSMUST00000115812.9	Pik3c3	ENSMUSG0000033628	phosphatidylinositol 3-kinase catalytic subunit type 3 Source MGI Symbol Acc MGI 2445019
F07	UPFM0930700	ENSMUST00000159413.1	Pvr	ENSMUSG0000040511	poliovirus receptor Source MGI Symbol Acc MGI 107741
F08	UPFM0853933	ENSMUST00000131775.1	Rab25	ENSMUSG0000008601	RAB25, member RAS oncogene family Source MGI Symbol Acc MGI 1858203
F09	UPFM0633380	ENSMUST00000020824.14	Rps6kb1	ENSMUSG0000020516	ribosomal protein S6 kinase, polypeptide 1 Source MGI Symbol Acc MGI 1270849
F10	UPFM0756901	ENSMUST00000079286.3	S100a7a	ENSMUSG0000063767	S100 calcium binding protein A7A Source MGI Symbol Acc MGI 2687194

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM064366 2	ENSMUST00000 163779.7	Snca	ENSMUSG00 000025889	synuclein, alpha Source MGI Symbol Acc MGI 1277151
F12	UPFM074402 4	ENSMUST00000 147051.1	Spata2	ENSMUSG00 000047030	spermatogenesis associated 2 Source MGI Symbol Acc MGI 2146885
G01	UPFM066020 6	ENSMUST00000 143379.1	Sqstm1	ENSMUSG00 000015837	sequestosome 1 Source MGI Symbol Acc MGI 107931
G02	UPFM100940 7	ENSMUST00000 081134.9	Sycp2	ENSMUSG00 000060445	synaptonemal complex protein 2 Source MGI Symbol Acc MGI 1933281
G03	UPFM099888 5	ENSMUST00000 148595.1	Maco1	ENSMUSG00 000028826	macoilin 1 Source MGI Symbol Acc MGI 1913396
G04	UPFM063847 1	ENSMUST00000 025263.14	Tnf	ENSMUSG00 000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G05	UPFM064695 8	ENSMUST00000 022663.6	Tnfrsf10b	ENSMUSG00 000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
G06	UPFM072017 7	ENSMUST00000 079772.3	Tnfrsf11b	ENSMUSG00 000063727	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin) Source MGI Symbol Acc MGI 109587
G07	UPFM070484 6	ENSMUST00000 144524.1	Tnfrsf1a	ENSMUSG00 000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G08	UPFM092017 5	ENSMUST00000 028311.12	Traf2	ENSMUSG00 000026942	TNF receptor-associated factor 2 Source MGI Symbol Acc MGI 101835
G09	UPFM066913 3	ENSMUST00000 171247.7	Trp53	ENSMUSG00 000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G10	UPFM065536 3	ENSMUST00000 034159.7	Txn14b	ENSMUSG00 000031723	thioredoxin-like 4B Source MGI Symbol Acc MGI 2443724
G11	UPFM077125 8	ENSMUST00000 198561.1	Ulk1	ENSMUSG00 000029512	unc-51 like kinase 1 Source MGI Symbol Acc MGI 1270126
G12	UPFM083576 8	ENSMUST00000 145065.1	Xiap	ENSMUSG00 000025860	X-linked inhibitor of apoptosis Source MGI Symbol Acc MGI 107572
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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