

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

## Mouse Apoptosis

Cat. no. 249955 UPMM-012ZR

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	Abl1	Aifm1	Akt1	Anxa5	Apaf1	Api5	Aif5	Bad	Bag1	Bag3	Bak1	Bax
B	Bcl10	Bcl2	Bcl2a1a	Bcl2l1	Bcl2l10	Bcl2l11	Bcl2l2	Bid	Birc2	Birc3	Birc5	Bnip2
C	Bnip3	Bnip3l	Bok	Card10	Casp1	Casp12	Casp14	Casp2	Casp3	Casp4	Casp6	Casp7
D	Casp8	Casp9	Cd40	Cd40lg	Cd70	Cflar	Cidea	Cideb	Crodd	Dad1	Dapk1	Dffa
E	Dffb	Diablo	Fadd	Fos	Fosl	Gadd45a	Igf1r	Il10	Lhx4	Ltr	Mapk1	Mcl1
F	Naip1	Naip2	Nfkb1	Nme5	Nod1	Nol3	Polb	Prdx2	Pycard	Ripk1	Tnf	Tnfrsf10b
G	Tnfrsf11b	Tnfrsf1a	Tnfrsf10	Tnfrsf12	Traf1	Traf2	Traf3	Trp53	Trp53bp2	Trp63	Trp73	Xiap
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	UPFM089352 2	ENSMUST00000 028190.12	Abl1	ENSMUSG00 000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A02	UPFM096772 6	ENSMUST00000 037349.7	Aifm1	ENSMUSG00 000036932	apoptosis-inducing factor, mitochondrion-associated 1 Source MGI Symbol Acc MGI 1349419
A03	UPFM082786 0	ENSMUST00000 139388.2	Akt1	ENSMUSG00 000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A04	UPFM099844 2	ENSMUST00000 029266.13	Anxa5	ENSMUSG00 000027712	annexin A5 Source MGI Symbol Acc MGI 106008
A05	UPFM087814 1	ENSMUST00000 160788.1	Apaf1	ENSMUSG00 000019979	apoptotic peptidase activating factor 1 Source MGI Symbol Acc MGI 1306796
A06	UPFM099640 4	ENSMUST00000 152454.7	Api5	ENSMUSG00 000027193	apoptosis inhibitor 5 Source MGI Symbol Acc MGI 1888993
A07	UPFM117294 3	ENSMUST00000 047356.10	Atf5	ENSMUSG00 000038539	activating transcription factor 5 Source MGI Symbol Acc MGI 2141857
A08	UPFM070030 3	ENSMUST00000 025910.12	Bad	ENSMUSG00 000024959	BCL2-associated agonist of cell death Source MGI Symbol Acc MGI 1096330
A09	UPFM068185 5	ENSMUST00000 108089.7	Bag1	ENSMUSG00 000028416	BCL2-associated athanogene 1 Source MGI Symbol Acc MGI 108047
A10	UPFM072585 2	ENSMUST00000 033136.8	Bag3	ENSMUSG00 000030847	BCL2-associated athanogene 3 Source MGI Symbol Acc MGI 1352493
A11	UPFM100989 2	ENSMUST00000 078691.11	Bak1	ENSMUSG00 000057789	BCL2-antagonist/killer 1 Source MGI Symbol Acc MGI 1097161
A12	UPFM090386 1	ENSMUST00000 211195.1	Bax	ENSMUSG00 000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
B01	UPFM117294 4	ENSMUST00000 198122.1	Bcl10	ENSMUSG00 000028191	B cell leukemia/lymphoma 10 Source MGI Symbol Acc MGI 1337994
B02	UPFM063585 3	ENSMUST00000 112751.1	Bcl2	ENSMUSG00 000057329	B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138
B03	UPFM063995 3	ENSMUST00000 098485.3	Bcl2a1a	ENSMUSG00 000102037	B cell leukemia/lymphoma 2 related protein A1a Source MGI Symbol Acc MGI 102687
B04	UPFM066341 1	ENSMUST00000 156688.1	Bcl2l1	ENSMUSG00 000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
B05	UPFM098543 9	ENSMUST00000 034709.5	Bcl2l10	ENSMUSG00 000032191	Bcl2-like 10 Source MGI Symbol Acc MGI 1330841
B06	UPFM088056 6	ENSMUST00000 019281.13	Bcl2l11	ENSMUSG00 000027381	BCL2-like 11 (apoptosis facilitator) Source MGI Symbol Acc MGI 1197519
B07	UPFM070717 1	ENSMUST00000 133397.3	Bcl2l2	ENSMUSG00 000089682	BCL2-like 2 Source MGI Symbol Acc MGI 108052
B08	UPFM069030 4	ENSMUST00000 161594.1	Bid	ENSMUSG00 000004446	BH3 interacting domain death agonist Source MGI Symbol Acc MGI 108093
B09	UPFM072353 2	ENSMUST00000 074246.6	Birc2	ENSMUSG00 000057367	baculoviral IAP repeat-containing 2 Source MGI Symbol Acc MGI 1197009
B10	UPFM070712 2	ENSMUST00000 013949.14	Birc3	ENSMUSG00 000032000	baculoviral IAP repeat-containing 3 Source MGI Symbol Acc MGI 1197007
B11	UPFM085491 3	ENSMUST00000 081387.10	Birc5	ENSMUSG00 000017716	baculoviral IAP repeat-containing 5 Source MGI Symbol Acc MGI 1203517
B12	UPFM083789 7	ENSMUST00000 034754.11	Bnip2	ENSMUSG00 000011958	BCL2/adenovirus E1B interacting protein 2 Source MGI Symbol Acc MGI 109327
C01	UPFM076925 5	ENSMUST00000 148970.1	Bnip3	ENSMUSG00 000078566	BCL2/adenovirus E1B interacting protein 3 Source MGI Symbol Acc MGI 109326
C02	UPFM073946 0	ENSMUST00000 151059.7	Bnip3l	ENSMUSG00 000022051	BCL2/adenovirus E1B interacting protein 3-like Source MGI Symbol Acc MGI 1332659
C03	UPFM067159 2	ENSMUST00000 027499.12	Bok	ENSMUSG00 000026278	BCL2-related ovarian killer Source MGI Symbol Acc MGI 1858494
C04	UPFM075485 5	ENSMUST00000 164826.7	Card10	ENSMUSG00 000033170	caspase recruitment domain family, member 10 Source MGI Symbol Acc MGI 2146012
C05	UPFM095374 8	ENSMUST00000 027015.5	Casp1	ENSMUSG00 000025888	caspase 1 Source MGI Symbol Acc MGI 96544
C06	UPFM100727 5	ENSMUST00000 138308.1	Casp12	ENSMUSG00 000025887	caspase 12 Source MGI Symbol Acc MGI 1312922
C07	UPFM088408 6	ENSMUST00000 005488.8	Casp14	ENSMUSG00 000005355	caspase 14 Source MGI Symbol Acc MGI 1335092
C08	UPFM092598 0	ENSMUST00000 139930.7	Casp2	ENSMUSG00 000029863	caspase 2 Source MGI Symbol Acc MGI 97295
C09	UPFM072895 1	ENSMUST00000 210534.1	Casp3	ENSMUSG00 000031628	caspase 3 Source MGI Symbol Acc MGI 107739
C10	UPFM090558 9	ENSMUST00000 160064.7	Casp4	ENSMUSG00 000033538	caspase 4, apoptosis-related cysteine peptidase Source MGI Symbol Acc MGI 107700
	UPFM077021	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	5	029626.8	Casp6	000027997	caspase 6 Source MGI Symbol Acc MGI 1312921
C12	UPFM063048 8	ENSMUST00000 237055.1	Casp7	ENSMUSG00 000025076	caspase 7 Source MGI Symbol Acc MGI 109383
D01	UPFM067082 6	ENSMUST00000 191201.6	Casp8	ENSMUSG00 000026029	caspase 8 Source MGI Symbol Acc MGI 1261423
D02	UPFM069330 9	ENSMUST00000 097805.10	Casp9	ENSMUSG00 000028914	caspase 9 Source MGI Symbol Acc MGI 1277950
D03	UPFM072215 7	ENSMUST00000 153105.1	Cd40	ENSMUSG00 000017652	CD40 antigen Source MGI Symbol Acc MGI 88336
D04	UPFM091836 0	ENSMUST00000 033466.1	Cd40lg	ENSMUSG00 000031132	CD40 ligand Source MGI Symbol Acc MGI 88337
D05	UPFM100648 5	ENSMUST00000 019633.7	Cd70	ENSMUSG00 000019489	CD70 antigen Source MGI Symbol Acc MGI 1195273
D06	UPFM082486 2	ENSMUST00000 069333.7	Cflar	ENSMUSG00 000026031	CASP8 and FADD-like apoptosis regulator Source MGI Symbol Acc MGI 1336166
D07	UPFM069650 1	ENSMUST00000 025404.9	Cidea	ENSMUSG00 000024526	cell death-inducing DNA fragmentation factor, alpha subunit-like effector A Source MGI Symbol Acc MGI 1270845
D08	UPFM075744 5	ENSMUST00000 001497.8	Cideb	ENSMUSG00 000022219	cell death-inducing DNA fragmentation factor, alpha subunit-like effector B Source MGI Symbol Acc MGI 1270844
D09	UPFM073143 9	ENSMUST00000 220279.1	Cradd	ENSMUSG00 000045867	CASP2 and RIPK1 domain containing adaptor with death domain Source MGI Symbol Acc MGI 1336168
D10	UPFM088233 5	ENSMUST00000 022781.7	Dad1	ENSMUSG00 000022174	defender against cell death 1 Source MGI Symbol Acc MGI 101912
D11	UPFM088410 1	ENSMUST00000 077453.12	Dapk1	ENSMUSG00 000021559	death associated protein kinase 1 Source MGI Symbol Acc MGI 1916885
D12	UPFM084529 8	ENSMUST00000 030816.3	Dffa	ENSMUSG00 000028974	DNA fragmentation factor, alpha subunit Source MGI Symbol Acc MGI 1196227
E01	UPFM073480 0	ENSMUST00000 133607.8	Dffb	ENSMUSG00 000029027	DNA fragmentation factor, beta subunit Source MGI Symbol Acc MGI 1196287
E02	UPFM100503 4	ENSMUST00000 145152.7	Diablo	ENSMUSG00 000029433	diablo, IAP-binding mitochondrial protein Source MGI Symbol Acc MGI 1913843
E03	UPFM075310 6	ENSMUST00000 033394.7	Fadd	ENSMUSG00 000031077	Fas (TNFRSF6)-associated via death domain Source MGI Symbol Acc MGI 109324
E04	UPFM099578 7	ENSMUST00000 235709.1	Fas	ENSMUSG00 000024778	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
E05	UPFM074944 2	ENSMUST00000 193648.1	Fasl	ENSMUSG00 000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
E06	UPFM091095 4	ENSMUST00000 204282.1	Gadd45a	ENSMUSG00 000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
E07	UPFM065329 9	ENSMUST00000 208871.1	Igf1r	ENSMUSG00 000005533	insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433
E08	UPFM117295 1	ENSMUST00000 016673.5	Il10	ENSMUSG00 000016529	interleukin 10 Source MGI Symbol Acc MGI 96537
E09	UPFM095869 3	ENSMUST00000 195275.1	Lhx4	ENSMUSG00 000026468	LIM homeobox protein 4 Source MGI Symbol Acc MGI 101776
E10	UPFM088696 8	ENSMUST00000 032489.7	Ltbr	ENSMUSG00 000030339	lymphotoxin B receptor Source MGI Symbol Acc MGI 104875
E11	UPFM066625 9	ENSMUST00000 232611.1	Mapk1	ENSMUSG00 000063358	mitogen-activated protein kinase 1 Source MGI Symbol Acc MGI 1346858
E12	UPFM071261 7	ENSMUST00000 178686.1	Mcl1	ENSMUSG00 000038612	myeloid cell leukemia sequence 1 Source MGI Symbol Acc MGI 101769
F01	UPFM084611 6	ENSMUST00000 022142.6	Naip1	ENSMUSG00 000021640	NLR family, apoptosis inhibitory protein 1 Source MGI Symbol Acc MGI 1298223
F02	UPFM068061 1	ENSMUST00000 067975.11	Naip2	ENSMUSG00 000078945	NLR family, apoptosis inhibitory protein 2 Source MGI Symbol Acc MGI 1298226
F03	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
F04	UPFM096963 6	ENSMUST00000 155114.1	Nme5	ENSMUSG00 000035984	NME/NM23 family member 5 Source MGI Symbol Acc MGI 1922783
F05	UPFM091709 9	ENSMUST00000 203076.1	Nod1	ENSMUSG00 000038058	nucleotide-binding oligomerization domain containing 1 Source MGI Symbol Acc MGI 1341839
F06	UPFM082637 4	ENSMUST00000 014920.7	Nol3	ENSMUSG00 000014776	nucleolar protein 3 (apoptosis repressor with CARD domain) Source MGI Symbol Acc MGI 1925938
F07	UPFM080561 1	ENSMUST00000 033938.6	Polb	ENSMUSG00 000031536	polymerase (DNA directed), beta Source MGI Symbol Acc MGI 97740
F08	UPFM095945 4	ENSMUST00000 127215.1	Prdx2	ENSMUSG00 000005161	peroxiredoxin 2 Source MGI Symbol Acc MGI 109486
F09	UPFM084237 4	ENSMUST00000 033056.4	Pycard	ENSMUSG00 000030793	PYD and CARD domain containing Source MGI Symbol Acc MGI 1931465
F10	UPFM086562 4	ENSMUST00000 167374.8	Ripk1	ENSMUSG00 000021408	receptor (TNFRSF)-interacting serine-threonine kinase 1 Source MGI Symbol Acc MGI 108212

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM063847 1	ENSMUST00000 025263.14	Tnf	ENSMUSG00 000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
F12	UPFM064695 8	ENSMUST00000 022663.6	Tnfrsf10b	ENSMUSG00 000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
G01	UPFM072017 7	ENSMUST00000 079772.3	Tnfrsf11b	ENSMUSG00 000063727	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin) Source MGI Symbol Acc MGI 109587
G02	UPFM070484 6	ENSMUST00000 144524.1	Tnfrsf1a	ENSMUSG00 000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G03	UPFM068209 9	ENSMUST00000 174840.1	Tnfsf10	ENSMUSG00 000039304	tumor necrosis factor (ligand) superfamily, member 10 Source MGI Symbol Acc MGI 107414
G04	UPFM092715 4	ENSMUST00000 181810.7	Tnfsf12	ENSMUSG00 000097328	tumor necrosis factor (ligand) superfamily, member 12 Source MGI Symbol Acc MGI 1196259
G05	UPFM083029 0	ENSMUST00000 028234.11	Traf1	ENSMUSG00 000026875	TNF receptor-associated factor 1 Source MGI Symbol Acc MGI 101836
G06	UPFM092017 5	ENSMUST00000 028311.12	Traf2	ENSMUSG00 000026942	TNF receptor-associated factor 2 Source MGI Symbol Acc MGI 101835
G07	UPFM080793 8	ENSMUST00000 021706.10	Traf3	ENSMUSG00 000021277	TNF receptor-associated factor 3 Source MGI Symbol Acc MGI 108041
G08	UPFM066913 3	ENSMUST00000 171247.7	Trp53	ENSMUSG00 000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G09	UPFM065980 6	ENSMUST00000 191804.1	Trp53bp2	ENSMUSG00 000026510	transformation related protein 53 binding protein 2 Source MGI Symbol Acc MGI 2138319
G10	UPFM062121 7	ENSMUST00000 115308.8	Trp63	ENSMUSG00 000022510	transformation related protein 63 Source MGI Symbol Acc MGI 1330810
G11	UPFM092417 3	ENSMUST00000 105643.7	Trp73	ENSMUSG00 000029026	transformation related protein 73 Source MGI Symbol Acc MGI 1336991
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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