

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

## Mouse Cell Death PathwayFinder

Cat. no. 249950 SBMM-212ZR

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

### Panel layout (Rotor-Gene): QuantiNova LNA 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 PCR System 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	9430015G10 Rik	Abl1	Akt1	Apaf1	App	Atg12	Atg16l1	Atg3	Atg5	Atg7	Atp6v1g2	Bax
B	Bcl2	Bcl2o1a	Bcl2l1	Bcl2l11	Becn1	Birc2	Birc3	Bmf	Casp1	Casp2	Casp3	Casp6
C	Casp7	Casp9	Ccdc103	Cd40	Cd40lg	Cflar	Comm4	Ctsb	Ctss	Cyld	Defb1	Denn4a
D	Dffa	Dpysl4	Eif5b	Esr1	Fas	Fasl	Foxl1	Gaa	Gadd45a	Galt5	Grb2	Hspbap1
E	Htt	Ifng	Igf1	Igf1r	Ins2	Irgm1	Jph3	Kcnp1	Mag	Map1lc3a	Mapk8	Mcl1
F	Nfkb1	Nol3	Olfrl404	Parp1	Parp2	Pik3c3	Pvr	Rab25	Rps6kb1	S100a7a	Snca	Spoa2
G	Sqstm1	Sycp2	Maco1	Tnf	Tnfrsf10b	Tnfrsf11b	Tnfrsf1a	Traf2	Trp53	Txn14b	Ulk1	Xiap
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBM0775383	ENSMUST00000127332.7	9430015G10Rik	ENSMUSG0000059939	RIKEN cDNA 9430015G10 gene Source MGI Symbol Acc MGI 2444364
A02	SBM1025688	ENSMUST00000127714.1	Abl1	ENSMUSG0000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A03	SBM1020452	ENSMUST00000144550.8	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A04	SBM0931259	ENSMUST00000160788.1	Apaf1	ENSMUSG0000019979	apoptotic peptidase activating factor 1 Source MGI Symbol Acc MGI 1306796
A05	SBM0970132	ENSMUST00000226801.1	App	ENSMUSG0000022892	amyloid beta (A4) precursor protein Source MGI Symbol Acc MGI 88059
A06	SBM1008240	ENSMUST00000035648.5	Atg12	ENSMUSG0000032905	autophagy related 12 Source MGI Symbol Acc MGI 1914776
A07	SBM0936237	ENSMUST00000151037.7	Atg16l1	ENSMUSG0000026289	autophagy related 16-like 1 ( <i>S. cerevisiae</i> ) Source MGI Symbol Acc MGI 1924290
A08	SBM0780376	ENSMUST00000150390.1	Atg3	ENSMUSG0000022663	autophagy related 3 Source MGI Symbol Acc MGI 1915091
A09	SBM0791795	ENSMUST00000217412.1	Atg5	ENSMUSG0000038160	autophagy related 5 Source MGI Symbol Acc MGI 1277186
A10	SBM0712806	ENSMUST00000182428.7	Atg7	ENSMUSG0000030314	autophagy related 7 Source MGI Symbol Acc MGI 1921494
A11	SBM0786675	ENSMUST00000130992.1	Atp6v1g2	ENSMUSG0000024403	ATPase, H+ transporting, lysosomal V1 subunit G2 Source MGI Symbol Acc MGI 1913487
A12	SBM0740166	ENSMUST00000211615.1	Bax	ENSMUSG0000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
B01	SBM0876340	ENSMUST00000189999.1	Bcl2	ENSMUSG0000057329	B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138
B02	SBM1020275	ENSMUST00000098485.3	Bcl2a1a	ENSMUSG0000102037	B cell leukemia/lymphoma 2 related protein A1a Source MGI Symbol Acc MGI 102687
B03	SBM0751583	ENSMUST00000134357.1	Bcl2l1	ENSMUSG0000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
B04	SBM1049841	ENSMUST00000089634.11	Bcl2l11	ENSMUSG0000027381	BCL2-like 11 (apoptosis facilitator) Source MGI Symbol Acc MGI 1197519
B05	SBM1046634	ENSMUST00000167818.7	Becn1	ENSMUSG0000035086	beclin 1, autophagy related Source MGI Symbol Acc MGI 1891828
B06	SBM0791338	ENSMUST00000190341.6	Birc2	ENSMUSG0000057367	baculoviral IAP repeat-containing 2 Source MGI Symbol Acc MGI 1197009
B07	SBM0873926	ENSMUST00000115672.1	Birc3	ENSMUSG0000032000	baculoviral IAP repeat-containing 3 Source MGI Symbol Acc MGI 1197007
B08	SBM0846761	ENSMUST00000110859.2	Bmf	ENSMUSG0000040093	BCL2 modifying factor Source MGI Symbol Acc MGI 2176433
B09	SBM0862549	ENSMUST00000027015.5	Casp1	ENSMUSG0000025888	caspase 1 Source MGI Symbol Acc MGI 96544
B10	SBM1225390	ENSMUST00000031895.12	Casp2	ENSMUSG0000029863	caspase 2 Source MGI Symbol Acc MGI 97295
B11	SBM0732165	ENSMUST00000093517.6	Casp3	ENSMUSG0000031628	caspase 3 Source MGI Symbol Acc MGI 107739
B12	SBM0701958	ENSMUST00000137314.1	Casp6	ENSMUSG0000027997	caspase 6 Source MGI Symbol Acc MGI 1312921
C01	SBM1225391	ENSMUST00000026062.9	Casp7	ENSMUSG0000025076	caspase 7 Source MGI Symbol Acc MGI 109383
C02	SBM0686567	ENSMUST00000097805.10	Casp9	ENSMUSG0000028914	caspase 9 Source MGI Symbol Acc MGI 1277950
C03	SBM0829197	ENSMUST00000159834.1	Ccdc103	ENSMUSG0000020930	coiled-coil domain containing 103 Source MGI Symbol Acc MGI 1920543
C04	SBM0757957	ENSMUST00000073707.8	Cd40	ENSMUSG0000017652	CD40 antigen Source MGI Symbol Acc MGI 88336
C05	SBM0708134	ENSMUST00000033466.1	Cd40lg	ENSMUSG0000031132	CD40 ligand Source MGI Symbol Acc MGI 88337
C06	SBM0727764	ENSMUST00000124567.1	Cflar	ENSMUSG0000026031	CASP8 and FADD-like apoptosis regulator Source MGI Symbol Acc MGI 1336166
C07	SBM0876592	ENSMUST00000214097.1	Comm4	ENSMUSG0000032299	COMM domain containing 4 Source MGI Symbol Acc MGI 1913449
C08	SBM0677916	ENSMUST00000225540.1	Ctsb	ENSMUSG0000021939	cathepsin B Source MGI Symbol Acc MGI 88561
C09	SBM0953672	ENSMUST00000015667.8	Ctss	ENSMUSG0000038642	cathepsin S Source MGI Symbol Acc MGI 107341
C10	SBM0870561	ENSMUST00000211554.1	Cyld	ENSMUSG0000036712	CYLD lysine 63 deubiquitinase Source MGI Symbol Acc MGI 1921506
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0921214	051017.8	Defb1	000044748	defensin beta 1 Source MGI Symbol Acc MGI 1096878
C12	SBM1090271	ENSMUST00000214001.1	Dennd4a	ENSMUSG0000053641	DENN/MADD domain containing 4A Source MGI Symbol Acc MGI 2142979
D01	SBM0824483	ENSMUST0000030816.3	Dffa	ENSMUSG0000028974	DNA fragmentation factor, alpha subunit Source MGI Symbol Acc MGI 1196227
D02	SBM0892898	ENSMUST00000122844.7	Dpysl4	ENSMUSG0000025478	dihydropyrimidinase-like 4 Source MGI Symbol Acc MGI 1349764
D03	SBM0819122	ENSMUST00000195664.1	Eif5b	ENSMUSG0000026083	eukaryotic translation initiation factor 5B Source MGI Symbol Acc MGI 2441772
D04	SBM0745819	ENSMUST00000067086.13	Esr1	ENSMUSG0000019768	estrogen receptor 1 (alpha) Source MGI Symbol Acc MGI 1352467
D05	SBM0856649	ENSMUST00000112472.3	Fas	ENSMUSG0000026828	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
D06	SBM0967876	ENSMUST00000000834.3	Fasl	ENSMUSG0000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
D07	SBM0748238	ENSMUST00000060271.2	Foxi1	ENSMUSG0000047861	forkhead box 11 Source MGI Symbol Acc MGI 1096329
D08	SBM0759058	ENSMUST00000128753.1	Gaa	ENSMUSG0000025579	glucosidase, alpha, acid Source MGI Symbol Acc MGI 95609
D09	SBM0962210	ENSMUST00000151958.1	Gadd45a	ENSMUSG0000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
D10	SBM1093507	ENSMUST00000144671.7	Galnt5	ENSMUSG0000026828	polypeptide N-acetylgalactosaminyltransferase 5 Source MGI Symbol Acc MGI 2179403
D11	SBM1054562	ENSMUST00000106497.7	Grb2	ENSMUSG0000059923	growth factor receptor bound protein 2 Source MGI Symbol Acc MGI 95805
D12	SBM0726856	ENSMUST00000023555.5	Hspbap1	ENSMUSG0000022849	Hspb associated protein 1 Source MGI Symbol Acc MGI 1913917
E01	SBM0987378	ENSMUST00000123755.7	Htt	ENSMUSG0000029104	huntingtin Source MGI Symbol Acc MGI 96067
E02	SBM0903694	ENSMUST00000068592.4	lfng	ENSMUSG0000055170	interferon gamma Source MGI Symbol Acc MGI 107656
E03	SBM1026650	ENSMUST00000122386.7	Igf1	ENSMUSG0000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
E04	SBM0769269	ENSMUST00000207621.1	Igf1r	ENSMUSG0000005533	insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433
E05	SBM0867142	ENSMUST00000125933.1	Ins2	ENSMUSG0000000215	insulin II Source MGI Symbol Acc MGI 96573
E06	SBM0768586	ENSMUST00000097271.3	Irgm1	ENSMUSG0000046879	immunity-related GTPase family M member 1 Source MGI Symbol Acc MGI 107567
E07	SBM0906192	ENSMUST00000169735.1	Jph3	ENSMUSG0000025318	junctophilin 3 Source MGI Symbol Acc MGI 1891497
E08	SBM0776287	ENSMUST00000101368.8	Kcnp1	ENSMUSG0000053519	Kv channel-interacting protein 1 Source MGI Symbol Acc MGI 1917607
E09	SBM0954134	ENSMUST00000188569.6	Mag	ENSMUSG0000036634	myelin-associated glycoprotein Source MGI Symbol Acc MGI 96912
E10	SBM0905604	ENSMUST00000029128.3	Map1lc3a	ENSMUSG0000027602	microtubule-associated protein 1 light chain 3 alpha Source MGI Symbol Acc MGI 1915661
E11	SBM0984642	ENSMUST00000132379.1	Mapk8	ENSMUSG0000021936	mitogen-activated protein kinase 8 Source MGI Symbol Acc MGI 1346861
E12	SBM0701175	ENSMUST00000178686.1	Mcl1	ENSMUSG0000038612	myeloid cell leukemia sequence 1 Source MGI Symbol Acc MGI 101769
F01	SBM0841870	ENSMUST00000164430.6	Nfkb1	ENSMUSG0000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
F02	SBM0777438	ENSMUST00000014920.7	Nol3	ENSMUSG0000014776	nucleolar protein 3 (apoptosis repressor with CARD domain) Source MGI Symbol Acc MGI 1925938
F03	SBM0991594	ENSMUST00000217374.1	Olf1404	ENSMUSG0000049456	olfactory receptor 1404 Source MGI Symbol Acc MGI 3031238
F04	SBM0750626	ENSMUST00000191639.1	Parp1	ENSMUSG0000026496	poly (ADP-ribose) polymerase family, member 1 Source MGI Symbol Acc MGI 1340806
F05	SBM0881717	ENSMUST00000226880.1	Parp2	ENSMUSG0000036023	poly (ADP-ribose) polymerase family, member 2 Source MGI Symbol Acc MGI 1341112
F06	SBM0993091	ENSMUST00000115811.7	Pik3c3	ENSMUSG0000033628	phosphatidylinositol 3-kinase catalytic subunit type 3 Source MGI Symbol Acc MGI 2445019
F07	SBM0902050	ENSMUST00000043517.7	Pvr	ENSMUSG0000040511	poliovirus receptor Source MGI Symbol Acc MGI 107741
F08	SBM0805282	ENSMUST00000008745.12	Rab25	ENSMUSG0000008601	RAB25, member RAS oncogene family Source MGI Symbol Acc MGI 1858203
F09	SBM0853475	ENSMUST00000058286.8	Rps6kb1	ENSMUSG0000020516	ribosomal protein S6 kinase, polypeptide 1 Source MGI Symbol Acc MGI 1270849
F10	SBM0819955	ENSMUST00000079286.3	S100a7a	ENSMUSG0000063767	S100 calcium binding protein A7A Source MGI Symbol Acc MGI 2687194

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM1045894	ENSMUST00000163779.7	Snca	ENSMUSG0000025889	synuclein, alpha Source MGI Symbol Acc MGI 1277151
F12	SBM0714054	ENSMUST00000147051.1	Spata2	ENSMUSG0000047030	spermatogenesis associated 2 Source MGI Symbol Acc MGI 2146885
G01	SBM1075778	ENSMUST00000131214.1	Sqstm1	ENSMUSG0000015837	sequestosome 1 Source MGI Symbol Acc MGI 107931
G02	SBM1082739	ENSMUST00000132611.7	Sycp2	ENSMUSG0000060445	synaptonemal complex protein 2 Source MGI Symbol Acc MGI 1933281
G03	SBM1031329	ENSMUST00000030628.14	Maco1	ENSMUSG0000028826	macoilin 1 Source MGI Symbol Acc MGI 1913396
G04	SBM0788439	ENSMUST00000025263.14	Tnf	ENSMUSG0000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G05	SBM0809431	ENSMUST00000224533.1	Tnfrsf10b	ENSMUSG0000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
G06	SBM0675830	ENSMUST00000079772.3	Tnfrsf11b	ENSMUSG0000063727	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin) Source MGI Symbol Acc MGI 109587
G07	SBM0837100	ENSMUST00000134803.1	Tnfrsf1a	ENSMUSG0000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G08	SBM0686660	ENSMUST00000151742.1	Traf2	ENSMUSG0000026942	TNF receptor-associated factor 2 Source MGI Symbol Acc MGI 101835
G09	SBM0841427	ENSMUST00000108657.3	Trp53	ENSMUSG0000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G10	SBM0680993	ENSMUST00000178445.1	Txn14b	ENSMUSG0000031723	thioredoxin-like 4B Source MGI Symbol Acc MGI 2443724
G11	SBM0718433	ENSMUST00000198470.1	Ulk1	ENSMUSG0000029512	unc-51 like kinase 1 Source MGI Symbol Acc MGI 1270126
G12	SBM0766940	ENSMUST00000115095.8	Xiap	ENSMUSG0000025860	X-linked inhibitor of apoptosis Source MGI Symbol Acc MGI 107572
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	SBM1218554	Sybr_MGDC	MGDC	Sybr_MGDC	Mouse Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
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 SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green 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	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208052

\*Larger kit sizes available.

The QuantiNova LNA 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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