

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

## Mouse NFκB Signaling Pathway

Cat. no. 249950 SBMM-025ZR

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	Agf	Akt1	Aif1	Aif2	Bcl10	Bcl2a1a	Bcl2l1	Bcl3	Birc3	Card10	Card11	Casp1
B	Casp8	Ccl2	Ccl5	Cd27	Cd40	Cflar	Chuk	Crebbp	Csf1	Csf2	Csf3	Egfr
C	Egr1	Eif2ak2	Elk1	F2r	Fadd	Fasf	Fos	Hmox1	Icam1	Ifng	Ikbkb	Ikbke
D	Ikbkg	Il10	Il1a	Il1b	Il1r1	Irak1	Irak2	Irf1	Jun	Lta	Ltr	Map3k1
E	Mapk3	Myd88	Nfkb1	Nfkb2	Nfkbia	Nod1	Raf1	Rel	Rela	Relb	Ripk1	Ripk2
F	Slc20a1	Smad3	Stat1	Tbk1	Tlr1	Tlr2	Tlr3	Tlr4	Tlr6	Tlr9	Tnf	Tnfaip3
G	Tnfrsf10b	Tnfrsf1a	Tnfrsf1b	Tnfsf10	Tnfsf14	Tollip	Tradd	Traf2	Traf3	Traf5	Traf6	Zap70
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	SBM0838798	ENSMUST00000063278.6	Agt	ENSMUSG0000031980	angiotensinogen (serpin peptidase inhibitor, clade A, member 8) Source MGI Symbol Acc MGI 87963
A02	SBM1020452	ENSMUST00000144550.8	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A03	SBM0806398	ENSMUST00000172154.7	Ahf1	ENSMUSG0000023027	activating transcription factor 1 Source MGI Symbol Acc MGI 1298366
A04	SBM1035001	ENSMUST00000112007.7	Ahf2	ENSMUSG0000027104	activating transcription factor 2 Source MGI Symbol Acc MGI 109349
A05	SBM0913860	ENSMUST00000198122.1	Bcl10	ENSMUSG0000028191	B cell leukemia/lymphoma 10 Source MGI Symbol Acc MGI 1337994
A06	SBM1020275	ENSMUST00000098485.3	Bcl2a1a	ENSMUSG0000102037	B cell leukemia/lymphoma 2 related protein A1a Source MGI Symbol Acc MGI 102687
A07	SBM0751583	ENSMUST00000134357.1	Bcl2l1	ENSMUSG0000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
A08	SBM0803235	ENSMUST00000120537.7	Bcl3	ENSMUSG0000053175	B cell leukemia/lymphoma 3 Source MGI Symbol Acc MGI 88140
A09	SBM0873926	ENSMUST00000115672.1	Birc3	ENSMUSG0000032000	baculoviral IAP repeat-containing 3 Source MGI Symbol Acc MGI 1197007
A10	SBM0863714	ENSMUST00000170584.1	Card10	ENSMUSG0000033170	caspase recruitment domain family, member 10 Source MGI Symbol Acc MGI 2146012
A11	SBM0728709	ENSMUST00000196169.1	Card11	ENSMUSG0000036526	caspase recruitment domain family, member 11 Source MGI Symbol Acc MGI 1916978
A12	SBM0862549	ENSMUST00000027015.5	Casp1	ENSMUSG0000025888	caspase 1 Source MGI Symbol Acc MGI 96544
B01	SBM0772558	ENSMUST00000027189.14	Casp8	ENSMUSG0000026029	caspase 8 Source MGI Symbol Acc MGI 1261423
B02	SBM0836747	ENSMUST00000000193.5	Ccl2	ENSMUSG0000035385	chemokine (C-C motif) ligand 2 Source MGI Symbol Acc MGI 98259
B03	SBM0703029	ENSMUST00000125015.1	Ccl5	ENSMUSG0000035042	chemokine (C-C motif) ligand 5 Source MGI Symbol Acc MGI 98262
B04	SBM1093198	ENSMUST00000032486.12	Cd27	ENSMUSG0000030336	CD27 antigen Source MGI Symbol Acc MGI 88326
B05	SBM0757957	ENSMUST00000073707.8	Cd40	ENSMUSG0000017652	CD40 antigen Source MGI Symbol Acc MGI 88336
B06	SBM0727764	ENSMUST00000124567.1	Cflar	ENSMUSG0000026031	CASP8 and FADD-like apoptosis regulator Source MGI Symbol Acc MGI 1336166
B07	SBM1034080	ENSMUST00000026217.10	Chuk	ENSMUSG0000025199	conserved helix-loop-helix ubiquitous kinase Source MGI Symbol Acc MGI 99484
B08	SBM0926551	ENSMUST00000205765.1	Crebbp	ENSMUSG0000022521	CREB binding protein Source MGI Symbol Acc MGI 1098280
B09	SBM0903322	ENSMUST00000155557.1	Csf1	ENSMUSG0000014599	colony stimulating factor 1 (macrophage) Source MGI Symbol Acc MGI 1339753
B10	SBM1080991	ENSMUST00000019060.5	Csf2	ENSMUSG0000018916	colony stimulating factor 2 (granulocyte-macrophage) Source MGI Symbol Acc MGI 1339752
B11	SBM0837472	ENSMUST00000038886.2	Csf3	ENSMUSG0000038067	colony stimulating factor 3 (granulocyte) Source MGI Symbol Acc MGI 1339751
B12	SBM1033270	ENSMUST00000020329.12	Egfr	ENSMUSG0000020122	epidermal growth factor receptor Source MGI Symbol Acc MGI 95294
C01	SBM0782056	ENSMUST00000064795.5	Egr1	ENSMUSG0000038418	early growth response 1 Source MGI Symbol Acc MGI 95295
C02	SBM1072371	ENSMUST00000024884.4	Eif2ak2	ENSMUSG0000024079	eukaryotic translation initiation factor 2-alpha kinase 2 Source MGI Symbol Acc MGI 1353449
C03	SBM0783393	ENSMUST00000009550.13	Elk1	ENSMUSG0000009406	ELK1, member of ETS oncogene family Source MGI Symbol Acc MGI 101833
C04	SBM0878566	ENSMUST00000059193.6	F2r	ENSMUSG0000048376	coagulation factor II (thrombin) receptor Source MGI Symbol Acc MGI 101802
C05	SBM0895464	ENSMUST00000033394.7	Fadd	ENSMUSG0000031077	Fas (TNFRSF6)-associated via death domain Source MGI Symbol Acc MGI 109324
C06	SBM0967876	ENSMUST00000000834.3	Fasl	ENSMUSG0000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
C07	SBM0977461	ENSMUST00000134311.1	Fos	ENSMUSG0000021250	FBJ osteosarcoma oncogene Source MGI Symbol Acc MGI 95574
C08	SBM0936413	ENSMUST00000005548.7	Hmox1	ENSMUSG0000005413	heme oxygenase 1 Source MGI Symbol Acc MGI 96163
C09	SBM0806584	ENSMUST00000215003.1	Icam1	ENSMUSG0000037405	intercellular adhesion molecule 1 Source MGI Symbol Acc MGI 96392
C10	SBM0903694	ENSMUST00000068592.4	Iifng	ENSMUSG0000055170	interferon gamma Source MGI Symbol Acc MGI 107656
		ENSMUST000000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0683235	144583.7	Ikbb	000031537	inhibitor of kappaB kinase beta Source MGI Symbol Acc MGI 1338071
C12	SBM1068072	ENSMUST00000 161764.7	Ikcke	ENSMUSG00 000042349	inhibitor of kappaB kinase epsilon Source MGI Symbol Acc MGI 1929612
D01	SBM0785643	ENSMUST00000 114127.7	Ikckg	ENSMUSG00 000004221	inhibitor of kappaB kinase gamma Source MGI Symbol Acc MGI 1338074
D02	SBM1004151	ENSMUST00000 016673.5	Il10	ENSMUSG00 000016529	interleukin 10 Source MGI Symbol Acc MGI 96537
D03	SBM1007460	ENSMUST00000 028882.1	Il1a	ENSMUSG00 000027399	interleukin 1 alpha Source MGI Symbol Acc MGI 96542
D04	SBM0738485	ENSMUST00000 028881.13	Il1b	ENSMUSG00 000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
D05	SBM1086348	ENSMUST00000 027241.10	Il1r1	ENSMUSG00 000026072	interleukin 1 receptor, type I Source MGI Symbol Acc MGI 96545
D06	SBM0933124	ENSMUST00000 148706.7	Irak1	ENSMUSG00 000031392	interleukin-1 receptor-associated kinase 1 Source MGI Symbol Acc MGI 107420
D07	SBM0679387	ENSMUST00000 089022.8	Irak2	ENSMUSG00 000060477	interleukin-1 receptor-associated kinase 2 Source MGI Symbol Acc MGI 2429603
D08	SBM1091850	ENSMUST00000 138913.7	Irf1	ENSMUSG00 000018899	interferon regulatory factor 1 Source MGI Symbol Acc MGI 96590
D09	SBM1045409	ENSMUST00000 107094.1	Jun	ENSMUSG00 000052684	jun proto-oncogene Source MGI Symbol Acc MGI 96646
D10	SBM0790437	ENSMUST00000 025266.5	Lta	ENSMUSG00 000024402	lymphotoxin A Source MGI Symbol Acc MGI 104797
D11	SBM0696880	ENSMUST00000 032489.7	Ltbr	ENSMUSG00 000030339	lymphotoxin B receptor Source MGI Symbol Acc MGI 104875
D12	SBM0811680	ENSMUST00000 145055.1	Map3k1	ENSMUSG00 000021754	mitogen-activated protein kinase kinase kinase 1 Source MGI Symbol Acc MGI 1346872
E01	SBM0856900	ENSMUST00000 206272.1	Mapk3	ENSMUSG00 000063065	mitogen-activated protein kinase 3 Source MGI Symbol Acc MGI 1346859
E02	SBM0986804	ENSMUST00000 035092.6	Myd88	ENSMUSG00 000032508	myeloid differentiation primary response gene 88 Source MGI Symbol Acc MGI 108005
E03	SBM0841870	ENSMUST00000 164430.6	Nfkb1	ENSMUSG00 000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
E04	SBM0970553	ENSMUST00000 237761.1	Nfkb2	ENSMUSG00 000025225	nuclear factor of kappa light polypeptide gene enhancer in B cells 2, p49/p100 Source MGI Symbol Acc MGI 1099800
E05	SBM0696431	ENSMUST00000 021413.8	Nfkbia	ENSMUSG00 000021025	nuclear factor of kappa light polypeptide gene enhancer in B cells inhibitor, alpha Source MGI Symbol Acc MGI 104741
E06	SBM0681489	ENSMUST00000 205242.1	Nod1	ENSMUSG00 000038058	nucleotide-binding oligomerization domain containing 1 Source MGI Symbol Acc MGI 1341839
E07	SBM0974573	ENSMUST00000 124553.3	Raf1	ENSMUSG00 000000441	v-raf-leukemia viral oncogene 1 Source MGI Symbol Acc MGI 97847
E08	SBM0781183	ENSMUST00000 102864.4	Rel	ENSMUSG00 000020275	reticuloendotheliosis oncogene Source MGI Symbol Acc MGI 97897
E09	SBM0937498	ENSMUST00000 237361.1	Rela	ENSMUSG00 000024927	v-rel reticuloendotheliosis viral oncogene homolog A (avian) Source MGI Symbol Acc MGI 103290
E10	SBM1089153	ENSMUST00000 094762.9	Relb	ENSMUSG00 000002983	avian reticuloendotheliosis viral (v-rel) oncogene related B Source MGI Symbol Acc MGI 103289
E11	SBM0953041	ENSMUST00000 167374.8	Ripk1	ENSMUSG00 000021408	receptor (TNFRSF)-interacting serine-threonine kinase 1 Source MGI Symbol Acc MGI 108212
E12	SBM0781529	ENSMUST00000 037035.11	Ripk2	ENSMUSG00 000041135	receptor (TNFRSF)-interacting serine-threonine kinase 2 Source MGI Symbol Acc MGI 1891456
F01	SBM0959526	ENSMUST00000 028880.9	Slc20a1	ENSMUSG00 000027397	solute carrier family 20, member 1 Source MGI Symbol Acc MGI 108392
F02	SBM1002783	ENSMUST00000 034973.9	Smad3	ENSMUSG00 000032402	SMAD family member 3 Source MGI Symbol Acc MGI 1201674
F03	SBM0954168	ENSMUST00000 070968.13	Stat1	ENSMUSG00 000026104	signal transducer and activator of transcription 1 Source MGI Symbol Acc MGI 103063
F04	SBM0858013	ENSMUST00000 219400.1	Tbk1	ENSMUSG00 000020115	TANK-binding kinase 1 Source MGI Symbol Acc MGI 1929658
F05	SBM0864936	ENSMUST00000 059349.5	Tlr1	ENSMUSG00 000044827	toll-like receptor 1 Source MGI Symbol Acc MGI 1341295
F06	SBM0974490	ENSMUST00000 029623.10	Tlr2	ENSMUSG00 000027995	toll-like receptor 2 Source MGI Symbol Acc MGI 1346060
F07	SBM0964228	ENSMUST00000 209772.1	Tlr3	ENSMUSG00 000031639	toll-like receptor 3 Source MGI Symbol Acc MGI 2156367
F08	SBM0745293	ENSMUST00000 107365.2	Tlr4	ENSMUSG00 000039005	toll-like receptor 4 Source MGI Symbol Acc MGI 96824
F09	SBM0968629	ENSMUST00000 201307.1	Tlr6	ENSMUSG00 000051498	toll-like receptor 6 Source MGI Symbol Acc MGI 1341296
F10	SBM0973468	ENSMUST00000 062241.10	Tlr9	ENSMUSG00 000045322	toll-like receptor 9 Source MGI Symbol Acc MGI 1932389

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0788439	ENSMUST0000025263.14	Tnf	ENSMUSG0000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
F12	SBM0936524	ENSMUST00000105527.1	Tnfaip3	ENSMUSG0000019850	tumor necrosis factor, alpha-induced protein 3 Source MGI Symbol Acc MGI 1196377
G01	SBM0809431	ENSMUST00000224533.1	Tnfrsf10b	ENSMUSG0000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
G02	SBM0837100	ENSMUST00000134803.1	Tnfrsf1a	ENSMUSG0000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G03	SBM0979488	ENSMUST00000143055.1	Tnfrsf1b	ENSMUSG0000028599	tumor necrosis factor receptor superfamily, member 1b Source MGI Symbol Acc MGI 1314883
G04	SBM0969669	ENSMUST00000046383.11	Tnfsf10	ENSMUSG0000039304	tumor necrosis factor (ligand) superfamily, member 10 Source MGI Symbol Acc MGI 107414
G05	SBM0681467	ENSMUST00000005976.7	Tnfsf14	ENSMUSG0000005824	tumor necrosis factor (ligand) superfamily, member 14 Source MGI Symbol Acc MGI 1355317
G06	SBM0724694	ENSMUST00000151890.2	Tollip	ENSMUSG0000025139	toll interacting protein Source MGI Symbol Acc MGI 1891808
G07	SBM0977630	ENSMUST00000144762.7	Tradd	ENSMUSG0000031887	TNFRSF1A-associated via death domain Source MGI Symbol Acc MGI 109200
G08	SBM0686660	ENSMUST00000151742.1	Traf2	ENSMUSG0000026942	TNF receptor-associated factor 2 Source MGI Symbol Acc MGI 101835
G09	SBM0833897	ENSMUST00000021706.10	Traf3	ENSMUSG0000021277	TNF receptor-associated factor 3 Source MGI Symbol Acc MGI 108041
G10	SBM0813211	ENSMUST00000193355.1	Traf5	ENSMUSG0000026637	TNF receptor-associated factor 5 Source MGI Symbol Acc MGI 107548
G11	SBM1225398	ENSMUST00000004949.7	Traf6	ENSMUSG0000027164	TNF receptor-associated factor 6 Source MGI Symbol Acc MGI 108072
G12	SBM0672843	ENSMUST00000190128.1	Zap70	ENSMUSG0000026117	zeta-chain (TCR) associated protein kinase Source MGI Symbol Acc MGI 99613
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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