

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

## Mouse Stress & Toxicity PathwayFinder

Cat. no. 249950 SBMM-003ZR

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	Adm	Akr1b3	Aqp1	Aqp2	Aqp4	Arnt	Atf4	Aif6	Aif6b	Atg12	Atg5	Atg7
B	Atm	Atr	Becn1	Bid	Bnip3l	Calr	Car9	Casp1	Cd12	Cd40lg	Cdkn1a	Cfr
C	Chek1	Chek2	Crp	Ddb2	Ddit3	Dnajc3	Edn1	Epo	Fas	Fth1	Gadd45a	Gadd45g
D	Gclc	Gclm	Grb2	Gsr	Gstp1	Hmx1	Hsp90aa1	Hsp90b1	Hspa4	Hspa4l	Hspa5	Hus1
E	Iifg	Il1a	Il1b	Il6	Ldha	Mcl1	Mmp9	Mre11a	Nbn	Nfat5	Nqo1	Parp1
F	Prdx1	Pvr	Rad17	Rad51	Rad9a	Ripk1	Ripk3	Serpine1	Slc2a1	Slc5a3	Slc9a3	Sgstm1
G	Tlr4	Tnf	Tnfrsf10b	Tnfrsf1a	Trp53	Txn1	Txn14b	Txnrd1	Ulk1	Vegfa	Xbp1	Xpc
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	SBM0999945	ENSMUST00000185766.1	Adm	ENSMUSG0000030790	adrenomedullin Source MGI Symbol Acc MGI 108058
A02	SBM0930878	ENSMUST00000142761.1	Akr1b3	ENSMUSG0000001642	aldo-keto reductase family 1, member B3 (aldose reductase) Source MGI Symbol Acc MGI 1353494
A03	SBM1015203	ENSMUST00000004774.3	Aqp1	ENSMUSG0000004655	aquaporin 1 Source MGI Symbol Acc MGI 103201
A04	SBM1013609	ENSMUST00000023752.5	Aqp2	ENSMUSG0000023013	aquaporin 2 Source MGI Symbol Acc MGI 1096865
A05	SBM0954652	ENSMUST000000235044.1	Aqp4	ENSMUSG0000024411	aquaporin 4 Source MGI Symbol Acc MGI 107387
A06	SBM0815999	ENSMUST000000140060.1	Arnt	ENSMUSG0000015522	aryl hydrocarbon receptor nuclear translocator Source MGI Symbol Acc MGI 88071
A07	SBM1055409	ENSMUST000000230434.1	Atf4	ENSMUSG00000042406	activating transcription factor 4 Source MGI Symbol Acc MGI 88096
A08	SBM0817114	ENSMUST000000027974.6	Atf6	ENSMUSG0000026663	activating transcription factor 6 Source MGI Symbol Acc MGI 1926157
A09	SBM1090753	ENSMUST000000015605.14	Atf6b	ENSMUSG0000015461	activating transcription factor 6 beta Source MGI Symbol Acc MGI 105121
A10	SBM1008240	ENSMUST000000035648.5	Atg12	ENSMUSG0000032905	autophagy related 12 Source MGI Symbol Acc MGI 1914776
A11	SBM0791795	ENSMUST000000217412.1	Atg5	ENSMUSG0000038160	autophagy related 5 Source MGI Symbol Acc MGI 1277186
A12	SBM0712806	ENSMUST000000182428.7	Atg7	ENSMUSG0000030314	autophagy related 7 Source MGI Symbol Acc MGI 1921494
B01	SBM0745660	ENSMUST000000150244.1	Atm	ENSMUSG0000034218	ataxia telangiectasia mutated Source MGI Symbol Acc MGI 107202
B02	SBM0707457	ENSMUST000000189602.6	Atr	ENSMUSG0000032409	ataxia telangiectasia and Rad3 related Source MGI Symbol Acc MGI 108028
B03	SBM1046634	ENSMUST000000167818.7	Becn1	ENSMUSG0000035086	beclin 1, autophagy related Source MGI Symbol Acc MGI 1891828
B04	SBM0938087	ENSMUST000000160684.7	Bid	ENSMUSG0000004446	BH3 interacting domain death agonist Source MGI Symbol Acc MGI 108093
B05	SBM0756647	ENSMUST000000129605.1	Bnip3l	ENSMUSG0000022051	BCL2/adenovirus E1B interacting protein 3-like Source MGI Symbol Acc MGI 1332659
B06	SBM0796075	ENSMUST000000003912.6	Calr	ENSMUSG0000003814	calreticulin Source MGI Symbol Acc MGI 88252
B07	SBM0866761	ENSMUST000000124114.7	Car9	ENSMUSG0000028463	carbonic anhydrase 9 Source MGI Symbol Acc MGI 2447188
B08	SBM0862549	ENSMUST000000027015.5	Casp1	ENSMUSG0000025888	caspase 1 Source MGI Symbol Acc MGI 96544
B09	SBM0687223	ENSMUST000000000194.3	Ccl12	ENSMUSG0000035352	chemokine (C-C motif) ligand 12 Source MGI Symbol Acc MGI 108224
B10	SBM0708134	ENSMUST000000033466.1	Cd40lg	ENSMUSG0000031132	CD40 ligand Source MGI Symbol Acc MGI 88337
B11	SBM1034022	ENSMUST000000023829.7	Cdkn1a	ENSMUSG0000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B12	SBM1091559	ENSMUST000000045706.11	Cfr	ENSMUSG0000041301	cystic fibrosis transmembrane conductance regulator Source MGI Symbol Acc MGI 88388
C01	SBM0725925	ENSMUST000000173963.8	Chek1	ENSMUSG0000032113	checkpoint kinase 1 Source MGI Symbol Acc MGI 1202065
C02	SBM0884188	ENSMUST000000066160.2	Chek2	ENSMUSG0000029521	checkpoint kinase 2 Source MGI Symbol Acc MGI 1355321
C03	SBM0905444	ENSMUST000000194251.1	Crp	ENSMUSG0000037942	C-reactive protein, pentraxin-related Source MGI Symbol Acc MGI 88512
C04	SBM0998185	ENSMUST000000152277.7	Ddb2	ENSMUSG0000002109	damage specific DNA binding protein 2 Source MGI Symbol Acc MGI 1355314
C05	SBM0724182	ENSMUST000000139091.1	Ddit3	ENSMUSG0000025408	DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247
C06	SBM1063097	ENSMUST000000022734.8	Dnajc3	ENSMUSG0000022136	DnaJ heat shock protein family (Hsp40) member C3 Source MGI Symbol Acc MGI 107373
C07	SBM0992224	ENSMUST000000021796.8	Edn1	ENSMUSG0000021367	endothelin 1 Source MGI Symbol Acc MGI 95283
C08	SBM0965635	ENSMUST000000111038.7	Epo	ENSMUSG0000029711	erythropoietin Source MGI Symbol Acc MGI 95407
C09	SBM0856649	ENSMUST000000112472.3	Fas	ENSMUSG0000024778	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
C10	SBM0754118	ENSMUST000000235196.1	Fth1	ENSMUSG0000024661	ferritin heavy polypeptide 1 Source MGI Symbol Acc MGI 95588
		ENSMUST000000		ENSMUSG00	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0962210	151958.1	Gadd45a	000036390	MGI 107799
C12	SBM0972980	ENSMUST0000021903.2	Gadd45g	ENSMUSG0000021453	growth arrest and DNA-damage-inducible 45 gamma Source MGI Symbol Acc MGI 1346325
D01	SBM1048397	ENSMUST0000034905.8	Gclc	ENSMUSG0000032350	glutamate-cysteine ligase, catalytic subunit Source MGI Symbol Acc MGI 104990
D02	SBM0944392	ENSMUST0000029769.13	Gclm	ENSMUSG0000028124	glutamate-cysteine ligase, modifier subunit Source MGI Symbol Acc MGI 104995
D03	SBM1054562	ENSMUST00000106497.7	Grb2	ENSMUSG0000059923	growth factor receptor bound protein 2 Source MGI Symbol Acc MGI 95805
D04	SBM0942303	ENSMUST0000033992.8	Gsr	ENSMUSG0000031584	glutathione reductase Source MGI Symbol Acc MGI 95804
D05	SBM1021264	ENSMUST00000237239.1	Gstp1	ENSMUSG0000060803	glutathione S-transferase, pi 1 Source MGI Symbol Acc MGI 95865
D06	SBM0936413	ENSMUST0000005548.7	Hmxo1	ENSMUSG0000005413	heme oxygenase 1 Source MGI Symbol Acc MGI 96163
D07	SBM0939146	ENSMUST00000155242.7	Hsp90aa1	ENSMUSG0000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
D08	SBM0747618	ENSMUST00000129178.7	Hsp90b1	ENSMUSG0000020048	heat shock protein 90, beta (Grp94), member 1 Source MGI Symbol Acc MGI 98817
D09	SBM0909157	ENSMUST0000020630.7	Hspa4	ENSMUSG0000020361	heat shock protein 4 Source MGI Symbol Acc MGI 1342292
D10	SBM0694050	ENSMUST00000203496.2	Hspa4l	ENSMUSG0000025757	heat shock protein 4 like Source MGI Symbol Acc MGI 107422
D11	SBM1001113	ENSMUST00000145466.1	Hspa5	ENSMUSG0000026864	heat shock protein 5 Source MGI Symbol Acc MGI 95835
D12	SBM0890659	ENSMUST00000127578.1	Hus1	ENSMUSG0000020413	HUS1 checkpoint clamp component Source MGI Symbol Acc MGI 1277962
E01	SBM0903694	ENSMUST00000068592.4	Iifng	ENSMUSG0000055170	interferon gamma Source MGI Symbol Acc MGI 107656
E02	SBM1007460	ENSMUST0000028882.1	Il1a	ENSMUSG0000027399	interleukin 1 alpha Source MGI Symbol Acc MGI 96542
E03	SBM0738485	ENSMUST0000028881.13	Il1b	ENSMUSG0000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
E04	SBM0742623	ENSMUST0000026845.11	Il6	ENSMUSG0000025746	interleukin 6 Source MGI Symbol Acc MGI 96559
E05	SBM1042883	ENSMUST00000209984.1	Ldha	ENSMUSG0000063229	lactate dehydrogenase A Source MGI Symbol Acc MGI 96759
E06	SBM0701175	ENSMUST00000178686.1	Mcl1	ENSMUSG0000038612	myeloid cell leukemia sequence 1 Source MGI Symbol Acc MGI 101769
E07	SBM1089430	ENSMUST0000017881.2	Mmp9	ENSMUSG0000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
E08	SBM0787147	ENSMUST00000215820.1	Mre11a	ENSMUSG0000031928	MRE11A homolog A, double strand break repair nuclease Source MGI Symbol Acc MGI 1100512
E09	SBM0680530	ENSMUST0000029879.14	Nbn	ENSMUSG0000028224	nibrin Source MGI Symbol Acc MGI 1351625
E10	SBM0948071	ENSMUST00000075922.10	Nfat5	ENSMUSG0000003847	nuclear factor of activated T cells 5 Source MGI Symbol Acc MGI 1859333
E11	SBM0878519	ENSMUST0000003947.8	Nqo1	ENSMUSG0000003849	NAD(P)H dehydrogenase, quinone 1 Source MGI Symbol Acc MGI 103187
E12	SBM0750626	ENSMUST00000191639.1	Parp1	ENSMUSG0000026496	poly (ADP-ribose) polymerase family, member 1 Source MGI Symbol Acc MGI 1340806
F01	SBM0764176	ENSMUST00000129315.7	Prdx1	ENSMUSG0000028691	peroxiredoxin 1 Source MGI Symbol Acc MGI 99523
F02	SBM0902050	ENSMUST00000043517.7	Pvr	ENSMUSG0000040511	poliovirus receptor Source MGI Symbol Acc MGI 107741
F03	SBM0733888	ENSMUST0000022136.13	Rad17	ENSMUSG0000021635	RAD17 checkpoint clamp loader component Source MGI Symbol Acc MGI 1333807
F04	SBM0702001	ENSMUST00000110828.1	Rad51	ENSMUSG0000027323	RAD51 recombinase Source MGI Symbol Acc MGI 97890
F05	SBM0843955	ENSMUST00000237278.10	Rad9a	ENSMUSG0000024824	RAD9 checkpoint clamp component A Source MGI Symbol Acc MGI 1328356
F06	SBM0953041	ENSMUST00000167374.8	Ripk1	ENSMUSG0000021408	receptor (TNFRSF)-interacting serine-threonine kinase 1 Source MGI Symbol Acc MGI 108212
F07	SBM0817077	ENSMUST00000178399.2	Ripk3	ENSMUSG0000022221	receptor-interacting serine-threonine kinase 3 Source MGI Symbol Acc MGI 2154952
F08	SBM0809699	ENSMUST00000041388.10	Serpine1	ENSMUSG0000037411	serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608
F09	SBM1008931	ENSMUST00000144329.7	Slc2a1	ENSMUSG0000028645	solute carrier family 2 (facilitated glucose transporter), member 1 Source MGI Symbol Acc MGI 95755
F10	SBM1083523	ENSMUST00000113975.2	Slc5a3	ENSMUSG0000089774	solute carrier family 5 (inositol transporters), member 3 Source MGI Symbol Acc MGI 1858226

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM1038383	ENSMUST00000225423.1	Slc9a3	ENSMUSG0000036123	solute carrier family 9 (sodium/hydrogen exchanger), member 3 Source MGI Symbol Acc MGI 105064
F12	SBM1075778	ENSMUST00000131214.1	Sqstm1	ENSMUSG0000015837	sequestosome 1 Source MGI Symbol Acc MGI 107931
G01	SBM0745293	ENSMUST00000107365.2	Tlr4	ENSMUSG0000039005	toll-like receptor 4 Source MGI Symbol Acc MGI 96824
G02	SBM0788439	ENSMUST0000025263.14	Tnf	ENSMUSG0000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G03	SBM0809431	ENSMUST00000224533.1	Tnfrsf10b	ENSMUSG0000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
G04	SBM0837100	ENSMUST00000134803.1	Tnfrsf1a	ENSMUSG0000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G05	SBM0841427	ENSMUST00000108657.3	Trp53	ENSMUSG0000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G06	SBM0878537	ENSMUST00000300051.5	Txn1	ENSMUSG0000028367	thioredoxin 1 Source MGI Symbol Acc MGI 98874
G07	SBM0680993	ENSMUST00000178445.1	Txn14b	ENSMUSG0000031723	thioredoxin-like 4B Source MGI Symbol Acc MGI 2443724
G08	SBM1225401	ENSMUST00000218694.1	Txnrd1	ENSMUSG0000020250	thioredoxin reductase 1 Source MGI Symbol Acc MGI 1354175
G09	SBM0718433	ENSMUST00000198470.1	Ulk1	ENSMUSG0000029512	unc-51 like kinase 1 Source MGI Symbol Acc MGI 1270126
G10	SBM1079198	ENSMUST00000217017.1	Vegfa	ENSMUSG0000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
G11	SBM0756103	ENSMUST00000145588.1	Xbp1	ENSMUSG0000020484	X-box binding protein 1 Source MGI Symbol Acc MGI 98970
G12	SBM0993944	ENSMUST00000206476.1	Xpc	ENSMUSG0000030094	xeroderma pigmentosum, complementation group C Source MGI Symbol Acc MGI 103557
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	ENSMUST0000026613.13	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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at [www.qiagen.com](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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