

# QuantiNova® LNA® PCR Focus Panels (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Mitochondria

Cat. no. 249950 SBMM-087ZA

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 (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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	Aifm2	Aip	Bak1	Bbc3	Bcl2	Bcl2l1	Bid	Bnip3	Cdkn2a	Cox10	Cox18	Cpt1b
B	Cpt2	Dnajc19	Dnm1l	Fis1	Timm10b	Grpel1	Hsp90aa1	Hspd1	Imp11	Imp2l	Lrpprc	Mfn1
C	Mfn2	Mipep	Msto1	Mtx2	Nefl	Opa1	Pmaip1	Rhot1	Rhot2	Sfn	Sh3glb1	Slc25a1
D	Slc25a10	Slc25a12	Slc25a13	Slc25a14	Slc25a15	Slc25a16	Slc25a17	Slc25a19	Slc25a2	Slc25a20	Slc25a21	Slc25a22
E	Slc25a23	Slc25a24	Slc25a25	Slc25a27	Slc25a3	Slc25a30	Slc25a31	Slc25a37	Slc25a4	Slc25a5	Sod1	Sod2
F	Stard3	Taz	Timm10	Timm17a	Timm17b	Timm22	Timm23	Timm44	Timm50	Timm8a1	Timm8b	Timm9
G	Tomm20	Tomm22	Tomm34	Tomm40	Tomm40l	Tomm70a	Trp53	Tspo	Ucp1	Ucp2	Ucp3	Uxi
H	Acfb	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	SBM0865597	ENSMUST00000067857.10	Aifm2	ENSMUSG0000020085	apoptosis-inducing factor, mitochondrion-associated 2 Source MGI Symbol Acc MGI 1918611
A02	SBM0900176	ENSMUST00000117831.7	Aip	ENSMUSG0000024847	aryl-hydrocarbon receptor-interacting protein Source MGI Symbol Acc MGI 109622
A03	SBM0828888	ENSMUST00000143158.2	Bak1	ENSMUSG0000057789	BCL2-antagonist/killer 1 Source MGI Symbol Acc MGI 1097161
A04	SBM1088969	ENSMUST00000002152.12	Bbc3	ENSMUSG0000002083	BCL2 binding component 3 Source MGI Symbol Acc MGI 2181667
A05	SBM0876340	ENSMUST00000189999.1	Bcl2	ENSMUSG0000057329	B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138
A06	SBM0751583	ENSMUST00000134357.1	Bcl2l1	ENSMUSG0000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
A07	SBM0938087	ENSMUST00000160684.7	Bid	ENSMUSG0000004446	BH3 interacting domain death agonist Source MGI Symbol Acc MGI 108093
A08	SBM0840313	ENSMUST00000130500.7	Bnip3	ENSMUSG0000078566	BCL2/adenovirus E1B interacting protein 3 Source MGI Symbol Acc MGI 109326
A09	SBM0998051	ENSMUST00000060501.4	Cdkn2a	ENSMUSG0000044303	cyclin dependent kinase inhibitor 2A Source MGI Symbol Acc MGI 104738
A10	SBM0841246	ENSMUST00000125702.1	Cox10	ENSMUSG0000042148	heme A farnesyltransferase cytochrome c oxidase assembly factor 10 Source MGI Symbol Acc MGI 1917633
A11	SBM0876275	ENSMUST00000048363.9	Cox18	ENSMUSG0000035505	cytochrome c oxidase assembly protein 18 Source MGI Symbol Acc MGI 2448532
A12	SBM0949787	ENSMUST00000109313.8	Cpt1b	ENSMUSG0000078937	carnitine palmitoyltransferase 1b, muscle Source MGI Symbol Acc MGI 1098297
B01	SBM0911444	ENSMUST00000030345.14	Cpt2	ENSMUSG0000028607	carnitine palmitoyltransferase 2 Source MGI Symbol Acc MGI 109176
B02	SBM0711582	ENSMUST00000108195.9	Dnajc19	ENSMUSG0000027679	DnaJ heat shock protein family (Hsp40) member C19 Source MGI Symbol Acc MGI 1914963
B03	SBM0821571	ENSMUST00000096229.10	Dnm1l	ENSMUSG0000022789	dynamin 1-like Source MGI Symbol Acc MGI 1921256
B04	SBM0854079	ENSMUST00000019198.6	Fis1	ENSMUSG0000019054	fission, mitochondrial 1 Source MGI Symbol Acc MGI 1913687
B05	SBM0691844	ENSMUST00000210350.1	Timm10b	ENSMUSG0000089847	translocase of inner mitochondrial membrane 10B Source MGI Symbol Acc MGI 1315196
B06	SBM0728745	ENSMUST00000031099.3	Grpel1	ENSMUSG0000029198	GrpE-like 1, mitochondrial Source MGI Symbol Acc MGI 1334417
B07	SBM0939146	ENSMUST00000155242.7	Hsp90aa1	ENSMUSG0000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
B08	SBM0789113	ENSMUST00000027123.14	Hspd1	ENSMUSG0000025980	heat shock protein 1 (chaperonin) Source MGI Symbol Acc MGI 96242
B09	SBM0975818	ENSMUST00000037499.5	Immp1l	ENSMUSG0000042670	IMP1 inner mitochondrial membrane peptidase-like (S. cerevisiae) Source MGI Symbol Acc MGI 1913791
B10	SBM0858752	ENSMUST00000134965.7	Immp2l	ENSMUSG0000056899	IMP2 inner mitochondrial membrane peptidase-like (S. cerevisiae) Source MGI Symbol Acc MGI 2135611
B11	SBM0946045	ENSMUST00000159222.1	Lrpprc	ENSMUSG0000024120	leucine-rich PPR-motif containing Source MGI Symbol Acc MGI 1919666
B12	SBM0907038	ENSMUST00000137565.7	Mfn1	ENSMUSG0000027668	mitofusin 1 Source MGI Symbol Acc MGI 1914664
C01	SBM0751130	ENSMUST00000150881.1	Mfn2	ENSMUSG0000029020	mitofusin 2 Source MGI Symbol Acc MGI 2442230
C02	SBM0987522	ENSMUST00000223709.1	Mipep	ENSMUSG0000021993	mitochondrial intermediate peptidase Source MGI Symbol Acc MGI 1917728
C03	SBM0982002	ENSMUST00000126245.1	Msto1	ENSMUSG0000068922	misato 1, mitochondrial distribution and morphology regulator Source MGI Symbol Acc MGI 2385175
C04	SBM0755411	ENSMUST00000129284.1	Mtx2	ENSMUSG0000027099	metaxin 2 Source MGI Symbol Acc MGI 1859652
C05	SBM0983466	ENSMUST00000022639.7	Nefl	ENSMUSG0000022055	neurofilament, light polypeptide Source MGI Symbol Acc MGI 97313
C06	SBM0928668	ENSMUST00000162240.1	Opa1	ENSMUSG0000038084	OPA1, mitochondrial dynamin like GTPase Source MGI Symbol Acc MGI 1921393
C07	SBM0884842	ENSMUST00000237161.1	Pmaip1	ENSMUSG0000024521	phorbol-12-myristate-13-acetate-induced protein 1 Source MGI Symbol Acc MGI 1930146
C08	SBM0828439	ENSMUST00000055056.15	Rhot1	ENSMUSG0000017686	ras homolog family member T1 Source MGI Symbol Acc MGI 1926078
C09	SBM0887832	ENSMUST00000177347.7	Rhot2	ENSMUSG0000025733	ras homolog family member T2 Source MGI Symbol Acc MGI 2384892
C10	SBM1012777	ENSMUST00000057311.3	Sfn	ENSMUSG0000047281	stratifin Source MGI Symbol Acc MGI 1891831
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0919404	200532.1	Sh3glb1	000037062	SH3-domain GRB2-like B1 (endophilin) Source MGI Symbol Acc MGI 1859730
C12	SBM1077805	ENSMUST0000003622.15	Slc25a1	ENSMUSG0000003528	solute carrier family 25 (mitochondrial carrier, citrate transporter), member 1 Source MGI Symbol Acc MGI 1345283
D01	SBM1049530	ENSMUST00000123373.1	Slc25a10	ENSMUSG00000025792	solute carrier family 25 (mitochondrial carrier, dicarboxylate transporter), member 10 Source MGI Symbol Acc MGI 1353497
D02	SBM0703954	ENSMUST00000147553.1	Slc25a12	ENSMUSG00000027010	solute carrier family 25 (mitochondrial carrier, Aralar), member 12 Source MGI Symbol Acc MGI 1926080
D03	SBM0672778	ENSMUST00000177698.3	Slc25a13	ENSMUSG00000015112	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 13 Source MGI Symbol Acc MGI 1354721
D04	SBM0842728	ENSMUST00000134257.7	Slc25a14	ENSMUSG00000031105	solute carrier family 25 (mitochondrial carrier, brain), member 14 Source MGI Symbol Acc MGI 1330823
D05	SBM0734652	ENSMUST00000033871.7	Slc25a15	ENSMUSG00000031482	solute carrier family 25 (mitochondrial carrier ornithine transporter), member 15 Source MGI Symbol Acc MGI 1342274
D06	SBM0972198	ENSMUST00000152350.1	Slc25a16	ENSMUSG00000071253	solute carrier family 25 (mitochondrial carrier, Graves disease autoantigen), member 16 Source MGI Symbol Acc MGI 1920382
D07	SBM0810128	ENSMUST00000023040.8	Slc25a17	ENSMUSG00000024040	solute carrier family 25 (mitochondrial carrier, peroxisomal membrane protein), member 17 Source MGI Symbol Acc MGI 1342248
D08	SBM0796205	ENSMUST00000106503.9	Slc25a19	ENSMUSG00000020744	solute carrier family 25 (mitochondrial thiamine pyrophosphate carrier), member 19 Source MGI Symbol Acc MGI 1914533
D09	SBM0690011	ENSMUST00000058635.3	Slc25a2	ENSMUSG00000050304	solute carrier family 25 (mitochondrial carrier, ornithine transporter) member 2 Source MGI Symbol Acc MGI 2137907
D10	SBM0992160	ENSMUST00000195260.1	Slc25a20	ENSMUSG00000032602	solute carrier family 25 (mitochondrial carnitine/acylcarnitine translocase), member 20 Source MGI Symbol Acc MGI 1928738
D11	SBM0726221	ENSMUST00000044634.11	Slc25a21	ENSMUSG00000035472	solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 21 Source MGI Symbol Acc MGI 2445059
D12	SBM0861868	ENSMUST00000184518.7	Slc25a22	ENSMUSG0000019082	solute carrier family 25 (mitochondrial carrier, glutamate), member 22 Source MGI Symbol Acc MGI 1915517
E01	SBM0694030	ENSMUST00000040280.13	Slc25a23	ENSMUSG00000046329	solute carrier family 25 (mitochondrial carrier phosphate carrier), member 23 Source MGI Symbol Acc MGI 1914222
E02	SBM1002300	ENSMUST00000140786.2	Slc25a24	ENSMUSG00000040322	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 24 Source MGI Symbol Acc MGI 1917160
E03	SBM0710216	ENSMUST00000136361.7	Slc25a25	ENSMUSG00000026819	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25 Source MGI Symbol Acc MGI 1915913
E04	SBM0757932	ENSMUST00000024705.5	Slc25a27	ENSMUSG00000023912	solute carrier family 25, member 27 Source MGI Symbol Acc MGI 1921261
E05	SBM1033133	ENSMUST00000167455.7	Slc25a3	ENSMUSG00000061904	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 3 Source MGI Symbol Acc MGI 1353498
E06	SBM1012671	ENSMUST00000227894.1	Slc25a30	ENSMUSG00000022003	solute carrier family 25, member 30 Source MGI Symbol Acc MGI 1914804
E07	SBM0712745	ENSMUST00000091184.8	Slc25a31	ENSMUSG00000069041	solute carrier family 25 (mitochondrial carrier adenine nucleotide translocator), member 31 Source MGI Symbol Acc MGI 1920583
E08	SBM0799944	ENSMUST00000037064.4	Slc25a37	ENSMUSG00000034248	solute carrier family 25, member 37 Source MGI Symbol Acc MGI 1914962
E09	SBM0684591	ENSMUST00000034049.4	Slc25a4	ENSMUSG00000031633	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4 Source MGI Symbol Acc MGI 1353495
E10	SBM0951976	ENSMUST00000126608.1	Slc25a5	ENSMUSG00000016319	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 Source MGI Symbol Acc MGI 1353496
E11	SBM0946306	ENSMUST00000023707.10	Sod1	ENSMUSG00000022982	superoxide dismutase 1, soluble Source MGI Symbol Acc MGI 98351
E12	SBM1063571	ENSMUST00000233791.1	Sod2	ENSMUSG0000006818	superoxide dismutase 2, mitochondrial Source MGI Symbol Acc MGI 98352
F01	SBM0946152	ENSMUST00000018311.4	Stard3	ENSMUSG00000018167	START domain containing 3 Source MGI Symbol Acc MGI 1929618
F02	SBM0907399	ENSMUST00000156212.7	Taz	ENSMUSG0000009995	tafazzin Source MGI Symbol Acc MGI 109626
F03	SBM0916800	ENSMUST00000028470.9	Timm10	ENSMUSG00000027076	translocase of inner mitochondrial membrane 10 Source MGI Symbol Acc MGI 1353429
F04	SBM1014774	ENSMUST00000081104.9	Timm17a	ENSMUSG00000062580	translocase of inner mitochondrial membrane 17a Source MGI Symbol Acc MGI 1343131
F05	SBM0711442	ENSMUST00000033498.9	Timm17b	ENSMUSG00000031158	translocase of inner mitochondrial membrane 17b Source MGI Symbol Acc MGI 1343176
F06	SBM0742339	ENSMUST00000152183.1	Timm22	ENSMUSG00000020843	translocase of inner mitochondrial membrane 22 Source MGI Symbol Acc MGI 1929742
F07	SBM1036910	ENSMUST00000170331.7	Timm23	ENSMUSG00000013701	translocase of inner mitochondrial membrane 23 Source MGI Symbol Acc MGI 1858317
F08	SBM1065402	ENSMUST00000003029.13	Timm44	ENSMUSG00000002949	translocase of inner mitochondrial membrane 44 Source MGI Symbol Acc MGI 1343262
F09	SBM0682511	ENSMUST00000134263.1	Timm50	ENSMUSG00000003438	translocase of inner mitochondrial membrane 50 Source MGI Symbol Acc MGI 1913775
F10	SBM1048550	ENSMUST00000054213.4	Timm8a1	ENSMUSG00000048007	translocase of inner mitochondrial membrane 8A1 Source MGI Symbol Acc MGI 1353433

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0803174	ENSMUST00000044051.5	Timm8b	ENSMUSG0000039016	translocase of inner mitochondrial membrane 8B Source MGI Symbol Acc MGI 1353424
F12	SBM0736022	ENSMUST00000221367.1	Timm9	ENSMUSG0000021079	translocase of inner mitochondrial membrane 9 Source MGI Symbol Acc MGI 1353436
G01	SBM0736666	ENSMUST00000212771.1	Tomm20	ENSMUSG0000093904	translocase of outer mitochondrial membrane 20 Source MGI Symbol Acc MGI 1915202
G02	SBM0773301	ENSMUST00000229502.1	Tomm22	ENSMUSG0000022427	translocase of outer mitochondrial membrane 22 Source MGI Symbol Acc MGI 2450248
G03	SBM0927247	ENSMUST00000132602.1	Tomm34	ENSMUSG0000018322	translocase of outer mitochondrial membrane 34 Source MGI Symbol Acc MGI 1914395
G04	SBM1030133	ENSMUST00000032555.9	Tomm40	ENSMUSG0000002984	translocase of outer mitochondrial membrane 40 Source MGI Symbol Acc MGI 1858259
G05	SBM0948045	ENSMUST00000147246.1	Tomm40l	ENSMUSG0000005674	translocase of outer mitochondrial membrane 40-like Source MGI Symbol Acc MGI 3589112
G06	SBM0754522	ENSMUST00000166897.2	Tomm70a	ENSMUSG0000022752	translocase of outer mitochondrial membrane 70A Source MGI Symbol Acc MGI 106295
G07	SBM0841427	ENSMUST00000108657.3	Trp53	ENSMUSG0000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G08	SBM0701920	ENSMUST00000047419.7	Tspo	ENSMUSG0000041736	translocator protein Source MGI Symbol Acc MGI 88222
G09	SBM1037476	ENSMUST00000034146.4	Ucp1	ENSMUSG00000031710	uncoupling protein 1 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 98894
G10	SBM0938442	ENSMUST00000207748.1	Ucp2	ENSMUSG00000033685	uncoupling protein 2 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 109354
G11	SBM0890962	ENSMUST00000107059.1	Ucp3	ENSMUSG00000032942	uncoupling protein 3 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 1099787
G12	SBM0782086	ENSMUST00000123836.1	Uxt	ENSMUSG0000001134	ubiquitously expressed prefoldin like chaperone Source MGI Symbol Acc MGI 1277988
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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