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

Mouse Mitochondrial Energy Metabolism

Cat. no. 249950 SBMM-008ZR

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** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Atp12a	Atp4a	Atp4b	Atp5a1	Atp5b	Atp5c1	Atp5d	Atp5f1	Atp5g1	Atp5g2	Atp5g3	Atp5h
B	Atp5j	Atp5j2	Atp5o	Atp6v0a2	Atp6v0d2	Atp6v1c2	Atp6v1e2	Atp6v1g3	Bcs1l	Cox11	Cox4i1	Cox4i2
C	Cox5a	Cox5b	Cox6a1	Cox6a2	Cox6b1	Cox6b2	Cox6c	Cox7a2	Cox7a2l	Cox7b	Cox8a	Cox8c
D	Cyc1	Lhpp	Ndufa1	Ndufa10	Ndufa11	Ndufa2	Ndufa3	Ndufa4	Ndufa5	Ndufa6	Ndufa7	Ndufa8
E	Ndufab1	Ndufb10	Ndufb2	Ndufb3	Ndufb4	Ndufb5	Ndufb6	Ndufb7	Ndufb8	Ndufb9	Ndufc1	Ndufc2
F	Ndufs1	Ndufs2	Ndufs3	Ndufs4	Ndufs5	Ndufs6	Ndufs7	Ndufs8	Ndufv1	Ndufv2	Ndufv3	Oxa1l
G	Ppa1	Ppa2	Sdha	Sdhb	Sdhc	Sdhd	Uqcr11	Uqcrc1	Uqcrc2	Uqcrfs1	Uqcrh	Uqcrq
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	SBM0853929	ENSMUST00000007340.3	Atp12a	ENSMUSG00000022229	ATPase, H+/K+ transporting, nongastric, alpha polypeptide Source MGI Symbol Acc MGI 1926943
A02	SBM0909111	ENSMUST00000165410.1	Atp4a	ENSMUSG00000005553	ATPase, H+/K+ exchanging, gastric, alpha polypeptide Source MGI Symbol Acc MGI 88113
A03	SBM1066932	ENSMUST00000210491.1	Atp4b	ENSMUSG00000031449	ATPase, H+/K+ exchanging, beta polypeptide Source MGI Symbol Acc MGI 88114
A04	SBM1087445	ENSMUST00000114748.1	Atp5a1	ENSMUSG00000025428	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1 Source MGI Symbol Acc MGI 88115
A05	SBM0760861	ENSMUST00000126040.7	Atp5b	ENSMUSG00000025393	ATP synthase, H+ transporting mitochondrial F1 complex, beta subunit Source MGI Symbol Acc MGI 107801
A06	SBM0680382	ENSMUST00000114896.7	Atp5c1	ENSMUSG00000025781	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1 Source MGI Symbol Acc MGI 1261437
A07	SBM0961781	ENSMUST00000105367.7	Atp5d	ENSMUSG00000003072	ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit Source MGI Symbol Acc MGI 1913293
A08	SBM0674546	ENSMUST00000143022.1	Atp5f1	ENSMUSG00000000563	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit B1 Source MGI Symbol Acc MGI 1100495
A09	SBM0929116	ENSMUST00000090541.11	Atp5g1	ENSMUSG00000006057	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C1 (subunit 9) Source MGI Symbol Acc MGI 107653
A10	SBM0984319	ENSMUST00000075630.9	Atp5g2	ENSMUSG00000062683	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C2 (subunit 9) Source MGI Symbol Acc MGI 1915192
A11	SBM0688724	ENSMUST00000155474.1	Atp5g3	ENSMUSG00000018770	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C3 (subunit 9) Source MGI Symbol Acc MGI 2442035
A12	SBM1039516	ENSMUST00000180072.7	Atp5h	ENSMUSG00000034566	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit D Source MGI Symbol Acc MGI 1918929
B01	SBM1083865	ENSMUST00000023608.13	Atp5j	ENSMUSG00000022890	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F Source MGI Symbol Acc MGI 107777
B02	SBM0980412	ENSMUST00000161845.1	Atp5j2	ENSMUSG00000038690	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F2 Source MGI Symbol Acc MGI 1927558
B03	SBM0919996	ENSMUST00000023677.9	Atp5o	ENSMUSG00000022956	ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit Source MGI Symbol Acc MGI 106341
B04	SBM0879605	ENSMUST00000200292.4	Atp6v0a2	ENSMUSG00000038023	ATPase, H+ transporting, lysosomal V0 subunit A2 Source MGI Symbol Acc MGI 104855
B05	SBM0880360	ENSMUST00000029900.5	Atp6v0d2	ENSMUSG00000028238	ATPase, H+ transporting, lysosomal V0 subunit D2 Source MGI Symbol Acc MGI 1924415
B06	SBM0933939	ENSMUST00000221129.1	Atp6v1c2	ENSMUSG00000020566	ATPase, H+ transporting, lysosomal V1 subunit C2 Source MGI Symbol Acc MGI 1916025
B07	SBM0795548	ENSMUST00000065758.7	Atp6v1e2	ENSMUSG00000053375	ATPase, H+ transporting, lysosomal V1 subunit E2 Source MGI Symbol Acc MGI 1922165
B08	SBM0880267	ENSMUST00000027643.5	Atp6v1g3	ENSMUSG00000026394	ATPase, H+ transporting, lysosomal V1 subunit G3 Source MGI Symbol Acc MGI 2450548
B09	SBM1092905	ENSMUST00000113733.9	Bcs1l	ENSMUSG00000026172	BCS1-like (yeast) Source MGI Symbol Acc MGI 1914071
B10	SBM0754217	ENSMUST00000099960.2	Cox11	ENSMUSG00000020544	cytochrome c oxidase assembly protein 11, copper chaperone Source MGI Symbol Acc MGI 1917052
B11	SBM0937936	ENSMUST00000034276.12	Cox4i1	ENSMUSG00000031818	cytochrome c oxidase subunit 4I1 Source MGI Symbol Acc MGI 88473
B12	SBM0777335	ENSMUST00000109821.1	Cox4i2	ENSMUSG00000009876	cytochrome c oxidase subunit 4I2 Source MGI Symbol Acc MGI 2135755
C01	SBM0980011	ENSMUST00000213678.1	Cox5a	ENSMUSG00000000088	cytochrome c oxidase subunit 5A Source MGI Symbol Acc MGI 88474
C02	SBM0768007	ENSMUST00000195151.5	Cox5b	ENSMUSG00000061518	cytochrome c oxidase subunit 5B Source MGI Symbol Acc MGI 88475
C03	SBM0678243	ENSMUST00000040154.8	Cox6a1	ENSMUSG00000041697	cytochrome c oxidase subunit 6A1 Source MGI Symbol Acc MGI 103099
C04	SBM1060756	ENSMUST00000033049.8	Cox6a2	ENSMUSG00000030785	cytochrome c oxidase subunit 6A2 Source MGI Symbol Acc MGI 104649
C05	SBM0898705	ENSMUST00000208838.1	Cox6b1	ENSMUSG00000036751	cytochrome c oxidase, subunit 6B1 Source MGI Symbol Acc MGI 107460
C06	SBM0986599	ENSMUST00000183971.7	Cox6b2	ENSMUSG00000051811	cytochrome c oxidase subunit 6B2 Source MGI Symbol Acc MGI 3044182
C07	SBM0763376	ENSMUST00000156915.2	Cox6c	ENSMUSG00000014313	cytochrome c oxidase subunit 6C Source MGI Symbol Acc MGI 104614
C08	SBM0909514	ENSMUST00000034881.7	Cox7a2	ENSMUSG00000032330	cytochrome c oxidase subunit 7A2 Source MGI Symbol Acc MGI 1316715
C09	SBM0862499	ENSMUST00000235085.1	Cox7a2l	ENSMUSG00000024248	cytochrome c oxidase subunit 7A2 like Source MGI Symbol Acc MGI 106015
C10	SBM0955662	ENSMUST00000033582.4	Cox7b	ENSMUSG00000031231	cytochrome c oxidase subunit 7B Source MGI Symbol Acc MGI 1913392
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0681185	237087.1	Cox8a	000035885	cytochrome c oxidase subunit 8A Source MGI Symbol Acc MGI 105959
C12	SBM0728008	ENSMUST00000 053611.4	Cox8c	ENSMUSG00 000043319	cytochrome c oxidase subunit 8C Source MGI Symbol Acc MGI 1922733
D01	SBM1087170	ENSMUST00000 229710.1	Cyc1	ENSMUSG00 000022551	cytochrome c-1 Source MGI Symbol Acc MGI 1913695
D02	SBM0875454	ENSMUST00000 209903.1	Lhpp	ENSMUSG00 000030946	phospholysine phosphohistidine inorganic pyrophosphate phosphatase Source MGI Symbol Acc MGI 1923679
D03	SBM0713338	ENSMUST00000 016571.7	Ndufa1	ENSMUSG00 000016427	NADH ubiquinone oxidoreductase subunit A1 Source MGI Symbol Acc MGI 1929511
D04	SBM0766885	ENSMUST00000 185251.1	Ndufa10	ENSMUSG00 000026260	NADH ubiquinone oxidoreductase subunit A10 Source MGI Symbol Acc MGI 1914523
D05	SBM1025031	ENSMUST00000 233832.1	Ndufa11	ENSMUSG00 000002379	NADH ubiquinone oxidoreductase subunit A11 Source MGI Symbol Acc MGI 1917125
D06	SBM0954219	ENSMUST00000 014438.4	Ndufa2	ENSMUSG00 000014294	NADH ubiquinone oxidoreductase subunit A2 Source MGI Symbol Acc MGI 1343103
D07	SBM0866718	ENSMUST00000 108644.7	Ndufa3	ENSMUSG00 000035674	NADH ubiquinone oxidoreductase subunit A3 Source MGI Symbol Acc MGI 1913341
D08	SBM0758551	ENSMUST00000 204714.1	Ndufa4	ENSMUSG00 000029632	Ndufa4, mitochondrial complex associated Source MGI Symbol Acc MGI 107686
D09	SBM0829117	ENSMUST00000 023851.8	Ndufa5	ENSMUSG00 000023089	NADH ubiquinone oxidoreductase subunit A5 Source MGI Symbol Acc MGI 1915452
D10	SBM0985295	ENSMUST00000 230589.1	Ndufa6	ENSMUSG00 000022450	NADH ubiquinone oxidoreductase subunit A6 Source MGI Symbol Acc MGI 1914380
D11	SBM0696267	ENSMUST00000 048249.7	Ndufa7	ENSMUSG00 000041881	NADH ubiquinone oxidoreductase subunit A7 Source MGI Symbol Acc MGI 1913666
D12	SBM0953077	ENSMUST00000 070112.5	Ndufa8	ENSMUSG00 000026895	NADH ubiquinone oxidoreductase subunit A8 Source MGI Symbol Acc MGI 1915625
E01	SBM0706483	ENSMUST00000 146964.1	Ndufab1	ENSMUSG00 000030869	NADH ubiquinone oxidoreductase subunit AB1 Source MGI Symbol Acc MGI 1917566
E02	SBM0737495	ENSMUST00000 045602.8	Ndufb10	ENSMUSG00 000040048	NADH ubiquinone oxidoreductase subunit B10 Source MGI Symbol Acc MGI 1915592
E03	SBM0923785	ENSMUST00000 002490.6	Ndufb2	ENSMUSG00 000002416	NADH ubiquinone oxidoreductase subunit B2 Source MGI Symbol Acc MGI 1915448
E04	SBM0897758	ENSMUST00000 027193.8	Ndufb3	ENSMUSG00 000026032	NADH ubiquinone oxidoreductase subunit B3 Source MGI Symbol Acc MGI 1913745
E05	SBM1085811	ENSMUST00000 135019.1	Ndufb4	ENSMUSG00 000022820	NADH ubiquinone oxidoreductase subunit B4 Source MGI Symbol Acc MGI 1915444
E06	SBM0778792	ENSMUST00000 127477.7	Ndufb5	ENSMUSG00 000027673	NADH ubiquinone oxidoreductase subunit B5 Source MGI Symbol Acc MGI 1913296
E07	SBM0707931	ENSMUST00000 095128.9	Ndufb6	ENSMUSG00 000071014	NADH ubiquinone oxidoreductase subunit B6 Source MGI Symbol Acc MGI 2684983
E08	SBM0961969	ENSMUST00000 127162.1	Ndufb7	ENSMUSG00 000033938	NADH ubiquinone oxidoreductase subunit B7 Source MGI Symbol Acc MGI 1914166
E09	SBM1035746	ENSMUST00000 169181.1	Ndufb8	ENSMUSG00 000025204	NADH ubiquinone oxidoreductase subunit B8 Source MGI Symbol Acc MGI 1914514
E10	SBM0843986	ENSMUST00000 022980.4	Ndufb9	ENSMUSG00 000022354	NADH ubiquinone oxidoreductase subunit B9 Source MGI Symbol Acc MGI 1913468
E11	SBM0684561	ENSMUST00000 135602.2	Ndufc1	ENSMUSG00 000037152	NADH ubiquinone oxidoreductase subunit C1 Source MGI Symbol Acc MGI 1913627
E12	SBM0953533	ENSMUST00000 149122.1	Ndufc2	ENSMUSG00 000030647	NADH ubiquinone oxidoreductase subunit C2 Source MGI Symbol Acc MGI 1344370
F01	SBM0774006	ENSMUST00000 185827.6	Ndufs1	ENSMUSG00 000025968	NADH ubiquinone oxidoreductase core subunit S1 Source MGI Symbol Acc MGI 2443241
F02	SBM1011324	ENSMUST00000 111318.7	Ndufs2	ENSMUSG00 000013593	NADH ubiquinone oxidoreductase core subunit S2 Source MGI Symbol Acc MGI 2385112
F03	SBM0932944	ENSMUST00000 140248.1	Ndufs3	ENSMUSG00 000005510	NADH ubiquinone oxidoreductase core subunit S3 Source MGI Symbol Acc MGI 1915599
F04	SBM0794027	ENSMUST00000 225035.1	Ndufs4	ENSMUSG00 000021764	NADH ubiquinone oxidoreductase core subunit S4 Source MGI Symbol Acc MGI 1343135
F05	SBM0891711	ENSMUST00000 030401.13	Ndufs5	ENSMUSG00 000028648	NADH ubiquinone oxidoreductase core subunit S5 Source MGI Symbol Acc MGI 1890889
F06	SBM0749955	ENSMUST00000 022097.5	Ndufs6	ENSMUSG00 000021606	NADH ubiquinone oxidoreductase core subunit S6 Source MGI Symbol Acc MGI 107932
F07	SBM0759294	ENSMUST00000 020361.6	Ndufs7	ENSMUSG00 000020153	NADH ubiquinone oxidoreductase core subunit S7 Source MGI Symbol Acc MGI 1922656
F08	SBM0940988	ENSMUST00000 237341.1	Ndufs8	ENSMUSG00 000059734	NADH ubiquinone oxidoreductase core subunit S8 Source MGI Symbol Acc MGI 2385079
F09	SBM1076691	ENSMUST00000 042497.13	Ndufv1	ENSMUSG00 000037916	NADH ubiquinone oxidoreductase core subunit V1 Source MGI Symbol Acc MGI 107851
F10	SBM0836353	ENSMUST00000 024909.14	Ndufv2	ENSMUSG00 000024099	NADH ubiquinone oxidoreductase core subunit V2 Source MGI Symbol Acc MGI 1920150

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0772395	ENSMUST00000189436.2	Ndufv3	ENSMUSG00000024038	NADH ubiquinone oxidoreductase core subunit V3 Source MGI Symbol Acc MGI 1890894
F12	SBM0785022	ENSMUST00000000985.6	Oxa1l	ENSMUSG00000000959	oxidase assembly 1-like Source MGI Symbol Acc MGI 1916339
G01	SBM1006267	ENSMUST00000162028.1	Ppa1	ENSMUSG00000020089	pyrophosphatase (inorganic) 1 Source MGI Symbol Acc MGI 97831
G02	SBM0800911	ENSMUST00000125858.4	Ppa2	ENSMUSG00000028013	pyrophosphatase (inorganic) 2 Source MGI Symbol Acc MGI 1922026
G03	SBM1018273	ENSMUST00000160667.7	Sdha	ENSMUSG00000021577	succinate dehydrogenase complex, subunit A, flavoprotein (Fp) Source MGI Symbol Acc MGI 1914195
G04	SBM1002550	ENSMUST00000129181.7	Sdhb	ENSMUSG00000009863	succinate dehydrogenase complex, subunit B, iron sulfur (Ip) Source MGI Symbol Acc MGI 1914930
G05	SBM1022909	ENSMUST00000081560.4	Sdhc	ENSMUSG00000058076	succinate dehydrogenase complex, subunit C, integral membrane protein Source MGI Symbol Acc MGI 1913302
G06	SBM0695141	ENSMUST00000000175.5	Sdhd	ENSMUSG00000000171	succinate dehydrogenase complex, subunit D, integral membrane protein Source MGI Symbol Acc MGI 1914175
G07	SBM0974886	ENSMUST00000138428.7	Uqcr11	ENSMUSG00000020163	ubiquinol-cytochrome c reductase, complex III subunit XI Source MGI Symbol Acc MGI 1913844
G08	SBM0827054	ENSMUST00000195387.1	Uqcrc1	ENSMUSG00000025651	ubiquinol-cytochrome c reductase core protein 1 Source MGI Symbol Acc MGI 107876
G09	SBM0962384	ENSMUST00000123704.8	Uqcrc2	ENSMUSG00000030884	ubiquinol cytochrome c reductase core protein 2 Source MGI Symbol Acc MGI 1914253
G10	SBM0730783	ENSMUST00000042834.3	Uqcrfs1	ENSMUSG00000038462	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 Source MGI Symbol Acc MGI 1913944
G11	SBM1015926	ENSMUST00000127175.1	Uqcrh	ENSMUSG00000063882	ubiquinol-cytochrome c reductase hinge protein Source MGI Symbol Acc MGI 1913826
G12	SBM0925011	ENSMUST00000061326.4	Uqcrq	ENSMUSG00000044894	ubiquinol-cytochrome c reductase, complex III subunit VII Source MGI Symbol Acc MGI 107807
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG00000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG00000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG00000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG00000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG00000023944	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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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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