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

Mouse Mitochondrial Energy Metabolism

Cat. no. 249955 UPMM-008ZR

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

Panel layout (Rotor-Gene): QuantiNova LNA Probe 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 Probe PCR 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 Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM0977738	ENSMUST00000007340.3	Atp12a	ENSMUSG00000022229	ATPase, H+/K+ transporting, nongastric, alpha polypeptide Source MGI Symbol Acc MGI 1926943
A02	UPFM0919383	ENSMUST00000005692.13	Atp4a	ENSMUSG00000005553	ATPase, H+/K+ exchanging, gastric, alpha polypeptide Source MGI Symbol Acc MGI 88113
A03	UPFM0880280	ENSMUST00000210491.1	Atp4b	ENSMUSG00000031449	ATPase, H+/K+ exchanging, beta polypeptide Source MGI Symbol Acc MGI 88114
A04	UPFM0892991	ENSMUST00000026495.14	Atp5a1	ENSMUSG00000025428	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1 Source MGI Symbol Acc MGI 88115
A05	UPFM0744775	ENSMUST00000126751.1	Atp5b	ENSMUSG00000025393	ATP synthase, H+ transporting mitochondrial F1 complex, beta subunit Source MGI Symbol Acc MGI 107801
A06	UPFM0624940	ENSMUST00000153554.7	Atp5c1	ENSMUSG00000025781	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1 Source MGI Symbol Acc MGI 1261437
A07	UPFM0940852	ENSMUST00000105367.7	Atp5d	ENSMUSG00000003072	ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit Source MGI Symbol Acc MGI 1913293
A08	UPFM0633801	ENSMUST00000143022.1	Atp5f1	ENSMUSG00000000563	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit B1 Source MGI Symbol Acc MGI 1100495
A09	UPFM0797044	ENSMUST00000178611.7	Atp5g1	ENSMUSG00000006057	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C1 (subunit 9) Source MGI Symbol Acc MGI 107653
A10	UPFM0873212	ENSMUST00000075630.9	Atp5g2	ENSMUSG00000062683	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C2 (subunit 9) Source MGI Symbol Acc MGI 1915192
A11	UPFM0996334	ENSMUST00000111996.7	Atp5g3	ENSMUSG00000018770	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C3 (subunit 9) Source MGI Symbol Acc MGI 2442035
A12	UPFM0992934	ENSMUST00000180072.7	Atp5h	ENSMUSG00000034566	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit D Source MGI Symbol Acc MGI 1918929
B01	UPFM0636532	ENSMUST00000114193.7	Atp5j	ENSMUSG00000022890	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F Source MGI Symbol Acc MGI 107777
B02	UPFM0955769	ENSMUST00000161845.1	Atp5j2	ENSMUSG00000038690	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F2 Source MGI Symbol Acc MGI 1927558
B03	UPFM1002289	ENSMUST00000023677.9	Atp5o	ENSMUSG00000022956	ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit Source MGI Symbol Acc MGI 106341
B04	UPFM0687749	ENSMUST00000200292.4	Atp6v0a2	ENSMUSG00000038023	ATPase, H+ transporting, lysosomal V0 subunit A2 Source MGI Symbol Acc MGI 104855
B05	UPFM0782274	ENSMUST00000029900.5	Atp6v0d2	ENSMUSG00000028238	ATPase, H+ transporting, lysosomal V0 subunit D2 Source MGI Symbol Acc MGI 1924415
B06	UPFM0971078	ENSMUST00000156727.7	Atp6v1c2	ENSMUSG00000020566	ATPase, H+ transporting, lysosomal V1 subunit C2 Source MGI Symbol Acc MGI 1916025
B07	UPFM0843772	ENSMUST00000235110.1	Atp6v1e2	ENSMUSG00000053375	ATPase, H+ transporting, lysosomal V1 subunit E2 Source MGI Symbol Acc MGI 1922165
B08	UPFM0780386	ENSMUST00000027643.5	Atp6v1g3	ENSMUSG00000026394	ATPase, H+ transporting, lysosomal V1 subunit G3 Source MGI Symbol Acc MGI 2450548
B09	UPFM0782788	ENSMUST00000113732.1	Bcs1l	ENSMUSG00000026172	BCS1-like (yeast) Source MGI Symbol Acc MGI 1914071
B10	UPFM0677298	ENSMUST00000020851.14	Cox11	ENSMUSG00000020544	cytochrome c oxidase assembly protein 11, copper chaperone Source MGI Symbol Acc MGI 1917052
B11	UPFM0893120	ENSMUST00000181847.7	Cox4i1	ENSMUSG00000031818	cytochrome c oxidase subunit 4I1 Source MGI Symbol Acc MGI 88473
B12	UPFM0970149	ENSMUST00000109821.1	Cox4i2	ENSMUSG00000009876	cytochrome c oxidase subunit 4I2 Source MGI Symbol Acc MGI 2135755
C01	UPFM0629173	ENSMUST00000000090.7	Cox5a	ENSMUSG00000000088	cytochrome c oxidase subunit 5A Source MGI Symbol Acc MGI 88474
C02	UPFM0856451	ENSMUST00000195151.5	Cox5b	ENSMUSG00000061518	cytochrome c oxidase subunit 5B Source MGI Symbol Acc MGI 88475
C03	UPFM0664256	ENSMUST00000040154.8	Cox6a1	ENSMUSG00000041697	cytochrome c oxidase subunit 6A1 Source MGI Symbol Acc MGI 103099
C04	UPFM0790840	ENSMUST00000033049.8	Cox6a2	ENSMUSG00000030785	cytochrome c oxidase subunit 6A2 Source MGI Symbol Acc MGI 104649
C05	UPFM1006472	ENSMUST00000075738.5	Cox6b1	ENSMUSG00000036751	cytochrome c oxidase, subunit 6B1 Source MGI Symbol Acc MGI 107460
C06	UPFM0809494	ENSMUST00000182738.7	Cox6b2	ENSMUSG00000051811	cytochrome c oxidase subunit 6B2 Source MGI Symbol Acc MGI 3044182
C07	UPFM0785297	ENSMUST00000014457.14	Cox6c	ENSMUSG00000014313	cytochrome c oxidase subunit 6C Source MGI Symbol Acc MGI 104614
C08	UPFM0739834	ENSMUST00000215933.1	Cox7a2	ENSMUSG00000032330	cytochrome c oxidase subunit 7A2 Source MGI Symbol Acc MGI 1316715
C09	UPFM0956282	ENSMUST00000025095.8	Cox7a2l	ENSMUSG00000024248	cytochrome c oxidase subunit 7A2 like Source MGI Symbol Acc MGI 106015
C10	UPFM0971105	ENSMUST00000155377.1	Cox7b	ENSMUSG00000031231	cytochrome c oxidase subunit 7B Source MGI Symbol Acc MGI 1913392
	UPFM099948	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	2	039758.5	Cox8a	000035885	cytochrome c oxidase subunit 8A Source MGI Symbol Acc MGI 105959
C12	UPFM1012485	ENSMUST00000053611.4	Cox8c	ENSMUSG00000043319	cytochrome c oxidase subunit 8C Source MGI Symbol Acc MGI 1922733
D01	UPFM0928505	ENSMUST00000229292.1	Cyc1	ENSMUSG00000022551	cytochrome c-1 Source MGI Symbol Acc MGI 1913695
D02	UPFM0792017	ENSMUST00000133969.7	Lhpp	ENSMUSG00000030946	phospholysine phosphohistidine inorganic pyrophosphate phosphatase Source MGI Symbol Acc MGI 1923679
D03	UPFM0832158	ENSMUST00000016571.7	Ndufa1	ENSMUSG00000016427	NADH ubiquinone oxidoreductase subunit A1 Source MGI Symbol Acc MGI 1929511
D04	UPFM0822505	ENSMUST00000185251.1	Ndufa10	ENSMUSG00000026260	NADH ubiquinone oxidoreductase subunit A10 Source MGI Symbol Acc MGI 1914523
D05	UPFM0894711	ENSMUST00000233457.1	Ndufa11	ENSMUSG00000002379	NADH ubiquinone oxidoreductase subunit A11 Source MGI Symbol Acc MGI 1917125
D06	UPFM0742178	ENSMUST00000014438.4	Ndufa2	ENSMUSG00000014294	NADH ubiquinone oxidoreductase subunit A2 Source MGI Symbol Acc MGI 1343103
D07	UPFM0690466	ENSMUST00000076657.10	Ndufa3	ENSMUSG00000035674	NADH ubiquinone oxidoreductase subunit A3 Source MGI Symbol Acc MGI 1913341
D08	UPFM0960994	ENSMUST00000204978.2	Ndufa4	ENSMUSG00000029632	Ndufa4, mitochondrial complex associated Source MGI Symbol Acc MGI 107686
D09	UPFM0887361	ENSMUST00000023851.8	Ndufa5	ENSMUSG00000023089	NADH ubiquinone oxidoreductase subunit A5 Source MGI Symbol Acc MGI 1915452
D10	UPFM0642251	ENSMUST00000230676.1	Ndufa6	ENSMUSG00000022450	NADH ubiquinone oxidoreductase subunit A6 Source MGI Symbol Acc MGI 1914380
D11	UPFM0721589	ENSMUST00000174847.7	Ndufa7	ENSMUSG00000041881	NADH ubiquinone oxidoreductase subunit A7 Source MGI Symbol Acc MGI 1913666
D12	UPFM0957214	ENSMUST00000070112.5	Ndufa8	ENSMUSG00000026895	NADH ubiquinone oxidoreductase subunit A8 Source MGI Symbol Acc MGI 1915625
E01	UPFM0698032	ENSMUST00000130904.1	Ndufab1	ENSMUSG00000030869	NADH ubiquinone oxidoreductase subunit AB1 Source MGI Symbol Acc MGI 1917566
E02	UPFM0819655	ENSMUST00000045602.8	Ndufb10	ENSMUSG00000040048	NADH ubiquinone oxidoreductase subunit B10 Source MGI Symbol Acc MGI 1915592
E03	UPFM0805951	ENSMUST00000119379.1	Ndufb2	ENSMUSG00000002416	NADH ubiquinone oxidoreductase subunit B2 Source MGI Symbol Acc MGI 1915448
E04	UPFM0997693	ENSMUST00000027193.8	Ndufb3	ENSMUSG00000026032	NADH ubiquinone oxidoreductase subunit B3 Source MGI Symbol Acc MGI 1913745
E05	UPFM0951403	ENSMUST00000023514.3	Ndufb4	ENSMUSG00000022820	NADH ubiquinone oxidoreductase subunit B4 Source MGI Symbol Acc MGI 1915444
E06	UPFM0752778	ENSMUST00000139593.7	Ndufb5	ENSMUSG00000027673	NADH ubiquinone oxidoreductase subunit B5 Source MGI Symbol Acc MGI 1913296
E07	UPFM0846264	ENSMUST00000108108.2	Ndufb6	ENSMUSG00000071014	NADH ubiquinone oxidoreductase subunit B6 Source MGI Symbol Acc MGI 2684983
E08	UPFM0857117	ENSMUST00000036996.5	Ndufb7	ENSMUSG00000033938	NADH ubiquinone oxidoreductase subunit B7 Source MGI Symbol Acc MGI 1914166
E09	UPFM0695753	ENSMUST00000169181.1	Ndufb8	ENSMUSG00000025204	NADH ubiquinone oxidoreductase subunit B8 Source MGI Symbol Acc MGI 1914514
E10	UPFM1126235	ENSMUST00000022980.4	Ndufb9	ENSMUSG00000022354	NADH ubiquinone oxidoreductase subunit B9 Source MGI Symbol Acc MGI 1913468
E11	UPFM0955683	ENSMUST00000193279.1	Ndufc1	ENSMUSG00000037152	NADH ubiquinone oxidoreductase subunit C1 Source MGI Symbol Acc MGI 1913627
E12	UPFM1008760	ENSMUST00000032882.8	Ndufc2	ENSMUSG00000030647	NADH ubiquinone oxidoreductase subunit C2 Source MGI Symbol Acc MGI 1344370
F01	UPFM0803619	ENSMUST00000185732.6	Ndufs1	ENSMUSG00000025968	NADH ubiquinone oxidoreductase core subunit S1 Source MGI Symbol Acc MGI 2443241
F02	UPFM0916708	ENSMUST00000013737.12	Ndufs2	ENSMUSG00000013593	NADH ubiquinone oxidoreductase core subunit S2 Source MGI Symbol Acc MGI 2385112
F03	UPFM0726848	ENSMUST00000152059.1	Ndufs3	ENSMUSG00000005510	NADH ubiquinone oxidoreductase core subunit S3 Source MGI Symbol Acc MGI 1915599
F04	UPFM0805804	ENSMUST00000232101.1	Ndufs4	ENSMUSG00000021764	NADH ubiquinone oxidoreductase core subunit S4 Source MGI Symbol Acc MGI 1343135
F05	UPFM0823445	ENSMUST00000137312.1	Ndufs5	ENSMUSG00000028648	NADH ubiquinone oxidoreductase core subunit S5 Source MGI Symbol Acc MGI 1890889
F06	UPFM0688486	ENSMUST00000222930.1	Ndufs6	ENSMUSG00000021606	NADH ubiquinone oxidoreductase core subunit S6 Source MGI Symbol Acc MGI 107932
F07	UPFM1009918	ENSMUST00000020361.6	Ndufs7	ENSMUSG00000020153	NADH ubiquinone oxidoreductase core subunit S7 Source MGI Symbol Acc MGI 1922656
F08	UPFM0622908	ENSMUST00000236801.1	Ndufs8	ENSMUSG00000059734	NADH ubiquinone oxidoreductase core subunit S8 Source MGI Symbol Acc MGI 2385079
F09	UPFM0986353	ENSMUST00000129706.1	Ndufv1	ENSMUSG00000037916	NADH ubiquinone oxidoreductase core subunit V1 Source MGI Symbol Acc MGI 107851
F10	UPFM0982851	ENSMUST00000143987.8	Ndufv2	ENSMUSG00000024099	NADH ubiquinone oxidoreductase core subunit V2 Source MGI Symbol Acc MGI 1920150

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM0833929	ENSMUST00000189436.2	Ndufv3	ENSMUSG00000024038	NADH ubiquinone oxidoreductase core subunit V3 Source MGI Symbol Acc MGI 1890894
F12	UPFM0886341	ENSMUST00000198107.1	Oxa1l	ENSMUSG00000000959	oxidase assembly 1-like Source MGI Symbol Acc MGI 1916339
G01	UPFM0874261	ENSMUST00000160607.1	Ppa1	ENSMUSG00000020089	pyrophosphatase (inorganic) 1 Source MGI Symbol Acc MGI 97831
G02	UPFM0619508	ENSMUST00000153387.5	Ppa2	ENSMUSG00000028013	pyrophosphatase (inorganic) 2 Source MGI Symbol Acc MGI 1922026
G03	UPFM0754079	ENSMUST00000160667.7	Sdha	ENSMUSG00000021577	succinate dehydrogenase complex, subunit A, flavoprotein (Fp) Source MGI Symbol Acc MGI 1914195
G04	UPFM0756533	ENSMUST00000125780.1	Sdhb	ENSMUSG00000009863	succinate dehydrogenase complex, subunit B, iron sulfur (Ip) Source MGI Symbol Acc MGI 1914930
G05	UPFM0740334	ENSMUST00000081560.4	Sdhc	ENSMUSG00000058076	succinate dehydrogenase complex, subunit C, integral membrane protein Source MGI Symbol Acc MGI 1913302
G06	UPFM0921687	ENSMUST00000000175.5	Sdhd	ENSMUSG00000000171	succinate dehydrogenase complex, subunit D, integral membrane protein Source MGI Symbol Acc MGI 1914175
G07	UPFM0753582	ENSMUST00000141683.1	Uqcr11	ENSMUSG00000020163	ubiquinol-cytochrome c reductase, complex III subunit XI Source MGI Symbol Acc MGI 1913844
G08	UPFM0787696	ENSMUST00000026743.13	Uqcrc1	ENSMUSG00000025651	ubiquinol-cytochrome c reductase core protein 1 Source MGI Symbol Acc MGI 107876
G09	UPFM0991278	ENSMUST00000208400.1	Uqcrc2	ENSMUSG00000030884	ubiquinol cytochrome c reductase core protein 2 Source MGI Symbol Acc MGI 1914253
G10	UPFM0916962	ENSMUST00000042834.3	Uqcrfs1	ENSMUSG00000038462	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 Source MGI Symbol Acc MGI 1913944
G11	UPFM0892436	ENSMUST00000134760.1	Uqcrh	ENSMUSG00000063882	ubiquinol-cytochrome c reductase hinge protein Source MGI Symbol Acc MGI 1913826
G12	UPFM0984628	ENSMUST00000109019.7	Uqcrq	ENSMUSG00000044894	ubiquinol-cytochrome c reductase, complex III subunit VII Source MGI Symbol Acc MGI 107807
H01	UPFM1132946	ENSMUST00000163829.1	Actb	ENSMUSG00000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM1132947	ENSMUST00000102476.4	B2m	ENSMUSG00000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM1132948	ENSMUST00000117757.8	Gapdh	ENSMUSG00000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM1132949	ENSMUST00000026613.13	Gusb	ENSMUSG00000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM1132950	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG00000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM1126609	UPL_MGDC	MGDC	UPL_MGDC	Mouse Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control

Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
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 Probe RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 µl QuantiNova Probe RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl QN ROX Reference Dye, 1.9 ml Water	208252

*Larger kit sizes available.

The QuantiNova LNA Probe 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 or can be requested from QIAGEN Technical Services or your local distributor.