

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

Mouse Mitochondrial Energy Metabolism

Cat. no. 249955 UPMM-008ZA

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 (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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	Lhpb	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	Sdhb	Sdhb	Sdhc	Sdhc	Sdhc	Uqcrc1	Uqcrc2	Uqcrc1	Uqcrc1	Uqcrc1
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	UPFM097773 8	ENSMUST00000 007340.3	Atp12a	ENSMUSG00 000022229	ATPase, H+/K+ transporting, nongastric, alpha polypeptide Source MGI Symbol Acc MGI 1926943
A02	UPFM091938 3	ENSMUST00000 005692.13	Atp4a	ENSMUSG00 000005553	ATPase, H+/K+ exchanging, gastric, alpha polypeptide Source MGI Symbol Acc MGI 88113
A03	UPFM088028 0	ENSMUST00000 210491.1	Atp4b	ENSMUSG00 000031449	ATPase, H+/K+ exchanging, beta polypeptide Source MGI Symbol Acc MGI 88114
A04	UPFM089299 1	ENSMUST00000 026495.14	Atp5a1	ENSMUSG00 000025428	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1 Source MGI Symbol Acc MGI 88115
A05	UPFM074477 5	ENSMUST00000 126751.1	Atp5b	ENSMUSG00 000025393	ATP synthase, H+ transporting mitochondrial F1 complex, beta subunit Source MGI Symbol Acc MGI 107801
A06	UPFM062494 0	ENSMUST00000 153554.7	Atp5c1	ENSMUSG00 000025781	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1 Source MGI Symbol Acc MGI 1261437
A07	UPFM094085 2	ENSMUST00000 105367.7	Atp5d	ENSMUSG00 000003072	ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit Source MGI Symbol Acc MGI 1913293
A08	UPFM063380 1	ENSMUST00000 143022.1	Atp5f1	ENSMUSG00 000000563	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit B1 Source MGI Symbol Acc MGI 1100495
A09	UPFM079704 4	ENSMUST00000 178611.7	Atp5g1	ENSMUSG00 000006057	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C1 (subunit 9) Source MGI Symbol Acc MGI 107653
A10	UPFM087321 2	ENSMUST00000 075630.9	Atp5g2	ENSMUSG00 000062683	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C2 (subunit 9) Source MGI Symbol Acc MGI 1915192
A11	UPFM099633 4	ENSMUST00000 111996.7	Atp5g3	ENSMUSG00 000018770	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C3 (subunit 9) Source MGI Symbol Acc MGI 2442035
A12	UPFM099293 4	ENSMUST00000 180072.7	Atp5h	ENSMUSG00 000034566	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit D Source MGI Symbol Acc MGI 1918929
B01	UPFM063653 2	ENSMUST00000 114193.7	Atp5j	ENSMUSG00 000022890	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F Source MGI Symbol Acc MGI 107777
B02	UPFM095576 9	ENSMUST00000 161845.1	Atp5j2	ENSMUSG00 000038690	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F2 Source MGI Symbol Acc MGI 1927558
B03	UPFM100228 9	ENSMUST00000 023677.9	Atp5o	ENSMUSG00 000022956	ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit Source MGI Symbol Acc MGI 106341
B04	UPFM068774 9	ENSMUST00000 200292.4	Atp6v0a2	ENSMUSG00 000038023	ATPase, H+ transporting, lysosomal V0 subunit A2 Source MGI Symbol Acc MGI 104855
B05	UPFM078227 4	ENSMUST00000 029900.5	Atp6v0d2	ENSMUSG00 000028238	ATPase, H+ transporting, lysosomal V0 subunit D2 Source MGI Symbol Acc MGI 1924415
B06	UPFM097107 8	ENSMUST00000 156727.7	Atp6v1c2	ENSMUSG00 000020566	ATPase, H+ transporting, lysosomal V1 subunit C2 Source MGI Symbol Acc MGI 1916025
B07	UPFM084377 2	ENSMUST00000 235110.1	Atp6v1e2	ENSMUSG00 000053375	ATPase, H+ transporting, lysosomal V1 subunit E2 Source MGI Symbol Acc MGI 1922165
B08	UPFM078038 6	ENSMUST00000 027643.5	Atp6v1g3	ENSMUSG00 000026394	ATPase, H+ transporting, lysosomal V1 subunit G3 Source MGI Symbol Acc MGI 2450548
B09	UPFM078278 8	ENSMUST00000 113732.1	Bcs1l	ENSMUSG00 000026172	BCS1-like (yeast) Source MGI Symbol Acc MGI 1914071
B10	UPFM067729 8	ENSMUST00000 020851.14	Cox11	ENSMUSG00 000020544	cytochrome c oxidase assembly protein 11, copper chaperone Source MGI Symbol Acc MGI 1917052
B11	UPFM089312 0	ENSMUST00000 181847.7	Cox4i1	ENSMUSG00 000031818	cytochrome c oxidase subunit 4I1 Source MGI Symbol Acc MGI 88473
B12	UPFM097014 9	ENSMUST00000 109821.1	Cox4i2	ENSMUSG00 000009876	cytochrome c oxidase subunit 4I2 Source MGI Symbol Acc MGI 2135755
C01	UPFM062917 3	ENSMUST00000 000090.7	Cox5a	ENSMUSG00 000000088	cytochrome c oxidase subunit 5A Source MGI Symbol Acc MGI 88474
C02	UPFM085645 1	ENSMUST00000 195151.5	Cox5b	ENSMUSG00 000061518	cytochrome c oxidase subunit 5B Source MGI Symbol Acc MGI 88475
C03	UPFM066425 6	ENSMUST00000 040154.8	Cox6a1	ENSMUSG00 000041697	cytochrome c oxidase subunit 6A1 Source MGI Symbol Acc MGI 103099
C04	UPFM079084 0	ENSMUST00000 033049.8	Cox6a2	ENSMUSG00 000030785	cytochrome c oxidase subunit 6A2 Source MGI Symbol Acc MGI 104649
C05	UPFM100647 2	ENSMUST00000 075738.5	Cox6b1	ENSMUSG00 000036751	cytochrome c oxidase, subunit 6B1 Source MGI Symbol Acc MGI 107460
C06	UPFM080949 4	ENSMUST00000 182738.7	Cox6b2	ENSMUSG00 000051811	cytochrome c oxidase subunit 6B2 Source MGI Symbol Acc MGI 3044182
C07	UPFM078529 7	ENSMUST00000 014457.14	Cox6c	ENSMUSG00 000014313	cytochrome c oxidase subunit 6C Source MGI Symbol Acc MGI 104614
C08	UPFM073983 4	ENSMUST00000 215933.1	Cox7a2	ENSMUSG00 000032330	cytochrome c oxidase subunit 7A2 Source MGI Symbol Acc MGI 1316715
C09	UPFM095628 2	ENSMUST00000 025095.8	Cox7a2l	ENSMUSG00 000024248	cytochrome c oxidase subunit 7A2 like Source MGI Symbol Acc MGI 106015
C10	UPFM097110 5	ENSMUST00000 155377.1	Cox7b	ENSMUSG00 000031231	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	UPFM101248 5	ENSMUST00000 053611.4	Cox8c	ENSMUSG00 000043319	cytochrome c oxidase subunit 8C Source MGI Symbol Acc MGI 1922733
D01	UPFM092850 5	ENSMUST00000 229292.1	Cyc1	ENSMUSG00 000022551	cytochrome c-1 Source MGI Symbol Acc MGI 1913695
D02	UPFM079201 7	ENSMUST00000 133969.7	Lhpb	ENSMUSG00 000030946	phospholysine phosphohistidine inorganic pyrophosphate phosphatase Source MGI Symbol Acc MGI 1923679
D03	UPFM083215 8	ENSMUST00000 016571.7	Ndufa1	ENSMUSG00 000016427	NADH ubiquinone oxidoreductase subunit A1 Source MGI Symbol Acc MGI 1929511
D04	UPFM082250 5	ENSMUST00000 185251.1	Ndufa10	ENSMUSG00 000026260	NADH ubiquinone oxidoreductase subunit A10 Source MGI Symbol Acc MGI 1914523
D05	UPFM089471 1	ENSMUST00000 233457.1	Ndufa11	ENSMUSG00 000002379	NADH ubiquinone oxidoreductase subunit A11 Source MGI Symbol Acc MGI 1917125
D06	UPFM074217 8	ENSMUST00000 014438.4	Ndufa2	ENSMUSG00 000014294	NADH ubiquinone oxidoreductase subunit A2 Source MGI Symbol Acc MGI 1343103
D07	UPFM069046 6	ENSMUST00000 076657.10	Ndufa3	ENSMUSG00 000035674	NADH ubiquinone oxidoreductase subunit A3 Source MGI Symbol Acc MGI 1913341
D08	UPFM096099 4	ENSMUST00000 204978.2	Ndufa4	ENSMUSG00 000029632	Ndufa4, mitochondrial complex associated Source MGI Symbol Acc MGI 107686
D09	UPFM088736 1	ENSMUST00000 023851.8	Ndufa5	ENSMUSG00 000023089	NADH ubiquinone oxidoreductase subunit A5 Source MGI Symbol Acc MGI 1915452
D10	UPFM064225 1	ENSMUST00000 230676.1	Ndufa6	ENSMUSG00 000022450	NADH ubiquinone oxidoreductase subunit A6 Source MGI Symbol Acc MGI 1914380
D11	UPFM072158 9	ENSMUST00000 174847.7	Ndufa7	ENSMUSG00 000041881	NADH ubiquinone oxidoreductase subunit A7 Source MGI Symbol Acc MGI 1913666
D12	UPFM095721 4	ENSMUST00000 070112.5	Ndufa8	ENSMUSG00 000026895	NADH ubiquinone oxidoreductase subunit A8 Source MGI Symbol Acc MGI 1915625
E01	UPFM069803 2	ENSMUST00000 130904.1	Ndufab1	ENSMUSG00 000030869	NADH ubiquinone oxidoreductase subunit AB1 Source MGI Symbol Acc MGI 1917566
E02	UPFM081965 5	ENSMUST00000 045602.8	Ndufb10	ENSMUSG00 000040048	NADH ubiquinone oxidoreductase subunit B10 Source MGI Symbol Acc MGI 1915592
E03	UPFM080595 1	ENSMUST00000 119379.1	Ndufb2	ENSMUSG00 000002416	NADH ubiquinone oxidoreductase subunit B2 Source MGI Symbol Acc MGI 1915448
E04	UPFM099769 3	ENSMUST00000 027193.8	Ndufb3	ENSMUSG00 000026032	NADH ubiquinone oxidoreductase subunit B3 Source MGI Symbol Acc MGI 1913745
E05	UPFM095140 3	ENSMUST00000 023514.3	Ndufb4	ENSMUSG00 000022820	NADH ubiquinone oxidoreductase subunit B4 Source MGI Symbol Acc MGI 1915444
E06	UPFM075277 8	ENSMUST00000 139593.7	Ndufb5	ENSMUSG00 000027673	NADH ubiquinone oxidoreductase subunit B5 Source MGI Symbol Acc MGI 1913296
E07	UPFM084626 4	ENSMUST00000 108108.2	Ndufb6	ENSMUSG00 000071014	NADH ubiquinone oxidoreductase subunit B6 Source MGI Symbol Acc MGI 2684983
E08	UPFM085711 7	ENSMUST00000 036996.5	Ndufb7	ENSMUSG00 000033938	NADH ubiquinone oxidoreductase subunit B7 Source MGI Symbol Acc MGI 1914166
E09	UPFM069575 3	ENSMUST00000 169181.1	Ndufb8	ENSMUSG00 000025204	NADH ubiquinone oxidoreductase subunit B8 Source MGI Symbol Acc MGI 1914514
E10	UPFM112623 5	ENSMUST00000 022980.4	Ndufb9	ENSMUSG00 000022354	NADH ubiquinone oxidoreductase subunit B9 Source MGI Symbol Acc MGI 1913468
E11	UPFM095568 3	ENSMUST00000 193279.1	Ndufc1	ENSMUSG00 000037152	NADH ubiquinone oxidoreductase subunit C1 Source MGI Symbol Acc MGI 1913627
E12	UPFM100876 0	ENSMUST00000 032882.8	Ndufc2	ENSMUSG00 000030647	NADH ubiquinone oxidoreductase subunit C2 Source MGI Symbol Acc MGI 1344370
F01	UPFM080361 9	ENSMUST00000 185732.6	Ndufs1	ENSMUSG00 000025968	NADH ubiquinone oxidoreductase core subunit S1 Source MGI Symbol Acc MGI 2443241
F02	UPFM091670 8	ENSMUST00000 013737.12	Ndufs2	ENSMUSG00 000013593	NADH ubiquinone oxidoreductase core subunit S2 Source MGI Symbol Acc MGI 2385112
F03	UPFM072684 8	ENSMUST00000 152059.1	Ndufs3	ENSMUSG00 000005510	NADH ubiquinone oxidoreductase core subunit S3 Source MGI Symbol Acc MGI 1915599
F04	UPFM080580 4	ENSMUST00000 232101.1	Ndufs4	ENSMUSG00 000021764	NADH ubiquinone oxidoreductase core subunit S4 Source MGI Symbol Acc MGI 1343135
F05	UPFM082344 5	ENSMUST00000 137312.1	Ndufs5	ENSMUSG00 000028648	NADH ubiquinone oxidoreductase core subunit S5 Source MGI Symbol Acc MGI 1890889
F06	UPFM068848 6	ENSMUST00000 222930.1	Ndufs6	ENSMUSG00 000021606	NADH ubiquinone oxidoreductase core subunit S6 Source MGI Symbol Acc MGI 107932
F07	UPFM100991 8	ENSMUST00000 020361.6	Ndufs7	ENSMUSG00 000020153	NADH ubiquinone oxidoreductase core subunit S7 Source MGI Symbol Acc MGI 1922656
F08	UPFM062290 8	ENSMUST00000 236801.1	Ndufs8	ENSMUSG00 000059734	NADH ubiquinone oxidoreductase core subunit S8 Source MGI Symbol Acc MGI 2385079
F09	UPFM098635 3	ENSMUST00000 129706.1	Ndufv1	ENSMUSG00 000037916	NADH ubiquinone oxidoreductase core subunit V1 Source MGI Symbol Acc MGI 107851
F10	UPFM098285 1	ENSMUST00000 143987.8	Ndufv2	ENSMUSG00 000024099	NADH ubiquinone oxidoreductase core subunit V2 Source MGI Symbol Acc MGI 1920150

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM083392 9	ENSMUST00000 189436.2	Ndufv3	ENSMUSG00 000024038	NADH ubiquinone oxidoreductase core subunit V3 Source MGI Symbol Acc MGI 1890894
F12	UPFM088634 1	ENSMUST00000 198107.1	Oxa1l	ENSMUSG00 000000959	oxidase assembly 1-like Source MGI Symbol Acc MGI 1916339
G01	UPFM087426 1	ENSMUST00000 160607.1	Ppa1	ENSMUSG00 000020089	pyrophosphatase (inorganic) 1 Source MGI Symbol Acc MGI 97831
G02	UPFM061950 8	ENSMUST00000 153387.5	Ppa2	ENSMUSG00 000028013	pyrophosphatase (inorganic) 2 Source MGI Symbol Acc MGI 1922026
G03	UPFM075407 9	ENSMUST00000 160667.7	Sdha	ENSMUSG00 000021577	succinate dehydrogenase complex, subunit A, flavoprotein (Fp) Source MGI Symbol Acc MGI 1914195
G04	UPFM075653 3	ENSMUST00000 125780.1	Sdhb	ENSMUSG00 000009863	succinate dehydrogenase complex, subunit B, iron sulfur (lp) Source MGI Symbol Acc MGI 1914930
G05	UPFM074033 4	ENSMUST00000 081560.4	Sdhc	ENSMUSG00 000058076	succinate dehydrogenase complex, subunit C, integral membrane protein Source MGI Symbol Acc MGI 1913302
G06	UPFM092168 7	ENSMUST00000 000175.5	Sdhd	ENSMUSG00 000000171	succinate dehydrogenase complex, subunit D, integral membrane protein Source MGI Symbol Acc MGI 1914175
G07	UPFM075358 2	ENSMUST00000 141683.1	Uqcr1l	ENSMUSG00 000020163	ubiquinol-cytochrome c reductase, complex III subunit XI Source MGI Symbol Acc MGI 1913844
G08	UPFM078769 6	ENSMUST00000 026743.13	Uqcrc1	ENSMUSG00 000025651	ubiquinol-cytochrome c reductase core protein 1 Source MGI Symbol Acc MGI 107876
G09	UPFM099127 8	ENSMUST00000 208400.1	Uqcrc2	ENSMUSG00 000030884	ubiquinol cytochrome c reductase core protein 2 Source MGI Symbol Acc MGI 1914253
G10	UPFM091696 2	ENSMUST00000 042834.3	Uqcrrf1	ENSMUSG00 000038462	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 Source MGI Symbol Acc MGI 1913944
G11	UPFM089243 6	ENSMUST00000 134760.1	Uqcrh	ENSMUSG00 000063882	ubiquinol-cytochrome c reductase hinge protein Source MGI Symbol Acc MGI 1913826
G12	UPFM098462 8	ENSMUST00000 109019.7	Uqcrrq	ENSMUSG00 000044894	ubiquinol-cytochrome c reductase, complex III subunit VII Source MGI Symbol Acc MGI 107807
H01	UPFM113294 6	ENSMUST00000 163829.1	Actb	ENSMUSG00 000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM113294 7	ENSMUST00000 102476.4	B2m	ENSMUSG00 000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM113294 8	ENSMUST00000 117757.8	Gapdh	ENSMUSG00 000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM113294 9	ENSMUST00000 026613.13	Gusb	ENSMUSG00 000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM113295 0	ENSMUST00000 166469.7	Hsp90ab1	ENSMUSG00 000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM112660 9	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 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova Probe RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 μ l QuantiNova Probe RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ l 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.

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