

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

## Rat Mitochondria

Cat. no. 249955 UPRN-087ZA

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](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Aifm2	Aip	Akl1	Bak1	Bmf	Bcl2	Bcl2l1	Bid	Bnip3	Cav2	Cdkn2a	Cln8
<b>B</b>	Cox18	Cpt1b	Cpt2	Dnm1l	Fis1	Timm10b	Gclc	Gclm	Gpx1	Grpel1	Hsp90aa1	Hspd1
<b>C</b>	Immp1l	Cox10	Mfn1	LOC10091114 85	Mipep	Msto1	Mtx2	Nefl	Opa1	Pmaip1	Ppargc1a	Rho12
<b>D</b>	Rho1	Sfn	Sh3glb1	Slc25a10	Slc25a12	Slc25a13	Slc25a14	Slc25a15	Slc25a16	Slc25a17	Slc25a19	Slc25a2
<b>E</b>	Slc25a20	Slc25a21	LOC10091114 40	Slc25a23	Slc25a24	Slc25a25	Slc25a27	Slc25a3	Slc25a30	Slc25a36	Slc25a37	Slc25a4
<b>F</b>	Slc25a5	Sod1	Sod2	Stard3	Taz	Timm10	Timm17a	LOC10091111 30	Timm22	Timm44	Timm8a1	Timm8b
<b>G</b>	Timm9	Tomm22	Tomm34	Tomm40	Tomm40l	Tomm70	Tp53	Tspo	Ucp1	Ucp2	Ucp3	Uxt
<b>H</b>	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1102117	ENSRNOT00000082463.1	Aifm2	ENSRNOG0000059445	apoptosis inducing factor, mitochondria associated 2 Source RGD Symbol Acc 1304964
A02	UPFR1015928	ENSRNOT00000000599.7	Aip	ENSRNOG0000022289	aryl-hydrocarbon receptor-interacting protein Source RGD Symbol Acc 628619
A03	UPFR1083196	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A04	UPFR1013012	ENSRNOT00000000576.5	Bak1	ENSRNOG0000000485	BCL2-antagonist/killer 1 Source RGD Symbol Acc 621635
A05	UPFR1060227	ENSRNOT00000010381.4	Bmf	ENSRNOG0000007529	Bcl2 modifying factor Source RGD Symbol Acc 628658
A06	UPFR1082998	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A07	UPFR1047186	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
A08	UPFR1018136	ENSRNOT00000016776.2	Bid	ENSRNOG0000012439	BH3 interacting domain death agonist Source RGD Symbol Acc 620160
A09	UPFR1105806	ENSRNOT00000023477.6	Bnip3	ENSRNOG0000017243	BCL2 interacting protein 3 Source RGD Symbol Acc 620800
A10	UPFR1045353	ENSRNOT00000080271.1	Cav2	ENSRNOG0000057713	caveolin 2 Source RGD Symbol Acc 620348
A11	UPFR1104432	ENSRNOT00000079251.1	Cdkn2a	ENSRNOG0000059837	cyclin-dependent kinase inhibitor 2A Source RGD Symbol Acc 2323
A12	UPFR1066048	ENSRNOT00000016756.4	Cln8	ENSRNOG0000012565	CLN8, transmembrane ER and ERGIC protein Source RGD Symbol Acc 1359518
B01	UPFR1084199	ENSRNOT00000004074.5	Cox18	ENSRNOG0000003052	cytochrome c oxidase assembly factor COX18 Source RGD Symbol Acc 1559547
B02	UPFR1021462	ENSRNOT00000013985.3	Cpt1b	ENSRNOG0000010438	carnitine palmitoyltransferase 1B Source RGD Symbol Acc 2397
B03	UPFR1106957	ENSRNOT00000016954.3	Cpt2	ENSRNOG0000012443	carnitine palmitoyltransferase 2 Source RGD Symbol Acc 2398
B04	UPFR1097426	ENSRNOT00000002482.7	Dnm1l	ENSRNOG0000001813	dynamin 1-like Source RGD Symbol Acc 620416
B05	UPFR1068708	ENSRNOT00000083471.1	Fis1	ENSRNOG0000001420	fission, mitochondrial 1 Source RGD Symbol Acc 1306668
B06	UPFR1066279	ENSRNOT00000076631.1	Timm10b	ENSRNOG0000050846	translocase of inner mitochondrial membrane 10B Source RGD Symbol Acc 71097
B07	UPFR1065988	ENSRNOT00000033196.3	Gclc	ENSRNOG0000006302	glutamate-cysteine ligase, catalytic subunit Source RGD Symbol Acc 619868
B08	UPFR1071868	ENSRNOT00000018343.4	Gclm	ENSRNOG0000013409	glutamate cysteine ligase, modifier subunit Source RGD Symbol Acc 619871
B09	UPFR1108384	ENSRNOT00000073247.2	Gpx1	ENSRNOG0000048812	glutathione peroxidase 1 Source RGD Symbol Acc 2729
B10	UPFR1110175	ENSRNOT00000008932.5	Grpel1	ENSRNOG0000006593	GrpE-like 1, mitochondrial Source RGD Symbol Acc 70947
B11	UPFR1014170	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
B12	UPFR1095647	ENSRNOT00000066589.2	Hspd1	ENSRNOG0000014525	heat shock protein family D member 1 Source RGD Symbol Acc 621314
C01	UPFR1019800	ENSRNOT00000006406.6	Imp1l	ENSRNOG0000004829	inner mitochondrial membrane peptidase subunit 1 Source RGD Symbol Acc 1587441
C02	UPFR1118909	ENSRNOT00000034261.5	Cox10	ENSRNOG0000024972	cytochrome c oxidase assembly factor heme A farnesyltransferase COX10 Source RGD Symbol Acc 1594623
C03	UPFR1067081	ENSRNOT00000065144.3	Mfn1	ENSRNOG0000011057	mitofusin 1 Source RGD Symbol Acc 621460
C04	UPFR1065851	ENSRNOT00000091132.1	LOC100911485	ENSRNOG0000046424	mitofusin 2 Source RGD Symbol Acc 628843
C05	UPFR1115315	ENSRNOT00000085785.1	Mipep	ENSRNOG0000013876	mitochondrial intermediate peptidase Source RGD Symbol Acc 621680
C06	UPFR1098426	ENSRNOT00000027579.4	Msto1	ENSRNOG0000020357	misato mitochondrial distribution and morphology regulator 1 Source RGD Symbol Acc 1306110
C07	UPFR1023291	ENSRNOT00000002134.5	Mtx2	ENSRNOG0000001559	metaxin 2 Source RGD Symbol Acc 1306473
C08	UPFR1018074	ENSRNOT00000018599.3	Nefl	ENSRNOG0000013658	neurofilament light Source RGD Symbol Acc 621458
C09	UPFR1114549	ENSRNOT00000002343.7	Opa1	ENSRNOG0000001717	OPA1, mitochondrial dynamin like GTPase Source RGD Symbol Acc 708423
C10	UPFR1055085	ENSRNOT00000025362.3	Pmaip1	ENSRNOG0000018770	phorbol-12-myristate-13-acetate-induced protein 1 Source RGD Symbol Acc 1359266
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1107303	006071.5	Ppargc1a	000004473	PPARG coactivator 1 alpha Source RGD Symbol Acc 620925
C12	UPFR1027177	ENSRNOT0000027083.5	Rhot2	ENSRNOG0000019930	ras homolog family member T2 Source RGD Symbol Acc 727970
D01	UPFR1103139	ENSRNOT00000082685.1	Rhot1	ENSRNOG0000004093	ras homolog family member T1 Source RGD Symbol Acc 1307023
D02	UPFR1042676	ENSRNOT00000043959.4	Sfn	ENSRNOG00000033153	stratifin Source RGD Symbol Acc 1304729
D03	UPFR1045647	ENSRNOT00000084337.1	Sh3glb1	ENSRNOG0000012957	SH3 domain -containing GRB2-like endophilin B1 Source RGD Symbol Acc 1304859
D04	UPFR1013146	ENSRNOT00000054963.2	Slc25a10	ENSRNOG00000036693	solute carrier family 25 member 10 Source RGD Symbol Acc 621430
D05	UPFR1086197	ENSRNOT00000036728.6	Slc25a12	ENSRNOG0000022922	solute carrier family 25 member 12 Source RGD Symbol Acc 1305181
D06	UPFR1039229	ENSRNOT00000013817.7	Slc25a13	ENSRNOG0000009957	solute carrier family 25 member 13 Source RGD Symbol Acc 1565889
D07	UPFR1115233	ENSRNOT00000009637.5	Slc25a14	ENSRNOG0000006871	solute carrier family 25 member 14 Source RGD Symbol Acc 621433
D08	UPFR1050914	ENSRNOT00000078971.1	Slc25a15	ENSRNOG0000011881	solute carrier family 25 member 15 Source RGD Symbol Acc 1311488
D09	UPFR1023037	ENSRNOT00000056047.3	Slc25a16	ENSRNOG0000000387	solute carrier family 25 member 16 Source RGD Symbol Acc 1311311
D10	UPFR1041313	ENSRNOT00000025758.5	Slc25a17	ENSRNOG0000018920	solute carrier family 25 member 17 Source RGD Symbol Acc 1311498
D11	UPFR1021453	ENSRNOT00000005292.4	Slc25a19	ENSRNOG0000003918	solute carrier family 25 member 19 Source RGD Symbol Acc 1359554
D12	UPFR1076578	ENSRNOT00000027128.3	Slc25a2	ENSRNOG0000027359	solute carrier family 25 member 2 Source RGD Symbol Acc 1310667
E01	UPFR1035839	ENSRNOT00000027520.4	Slc25a20	ENSRNOG0000020288	solute carrier family 25 member 20 Source RGD Symbol Acc 621443
E02	UPFR1045396	ENSRNOT00000034342.5	Slc25a21	ENSRNOG0000008931	solute carrier family 25 member 21 Source RGD Symbol Acc 621444
E03	UPFR1057076	ENSRNOT00000025240.6	LOC100911440	ENSRNOG0000049944	solute carrier family 25 member 22 Source RGD Symbol Acc 1307826
E04	UPFR1086833	ENSRNOT00000073000.2	Slc25a23	ENSRNOG0000047781	solute carrier family 25 member 23 Source RGD Symbol Acc 1588586
E05	UPFR1071522	ENSRNOT00000027765.5	Slc25a24	ENSRNOG0000020470	solute carrier family 25 member 24 Source RGD Symbol Acc 1311982
E06	UPFR1095684	ENSRNOT00000020206.5	Slc25a25	ENSRNOG0000014338	solute carrier family 25 member 25 Source RGD Symbol Acc 628666
E07	UPFR1018661	ENSRNOT00000052068.3	Slc25a27	ENSRNOG0000010592	solute carrier family 25, member 27 Source RGD Symbol Acc 620787
E08	UPFR1102650	ENSRNOT00000080824.1	Slc25a3	ENSRNOG0000008289	solute carrier family 25 member 3 Source RGD Symbol Acc 70986
E09	UPFR1098810	ENSRNOT00000001389.7	Slc25a30	ENSRNOG0000001052	solute carrier family 25, member 30 Source RGD Symbol Acc 1359702
E10	UPFR1114639	ENSRNOT00000037120.5	Slc25a36	ENSRNOG0000013802	solute carrier family 25 member 36 Source RGD Symbol Acc 1591928
E11	UPFR1092260	ENSRNOT00000021636.4	Slc25a37	ENSRNOG0000015495	solute carrier family 25 member 37 Source RGD Symbol Acc 1359361
E12	UPFR1053922	ENSRNOT00000014704.4	Slc25a4	ENSRNOG0000010830	solute carrier family 25 member 4 Source RGD Symbol Acc 620352
F01	UPFR1092781	ENSRNOT00000015085.6	Slc25a5	ENSRNOG00000039980	solute carrier family 25 member 5 Source RGD Symbol Acc 620353
F02	UPFR1062096	ENSRNOT00000002885.6	Sod1	ENSRNOG0000002115	superoxide dismutase 1 Source RGD Symbol Acc 3731
F03	UPFR1090502	ENSRNOT00000025794.4	Sod2	ENSRNOG0000019048	superoxide dismutase 2 Source RGD Symbol Acc 3732
F04	UPFR1108618	ENSRNOT00000064190.3	Stard3	ENSRNOG0000042044	StAR-related lipid transfer domain containing 3 Source RGD Symbol Acc 1549768
F05	UPFR1090727	ENSRNOT00000089778.1	Taz	ENSRNOG0000053023	tafazzin Source RGD Symbol Acc 1588532
F06	UPFR1026336	ENSRNOT00000010619.4	Timm10	ENSRNOG0000007883	translocase of inner mitochondrial membrane 10 Source RGD Symbol Acc 621741
F07	UPFR1110271	ENSRNOT00000009398.4	Timm17a	ENSRNOG0000007040	translocase of inner mitochondrial membrane 17A Source RGD Symbol Acc 3862
F08	UPFR1018025	ENSRNOT00000066373.3	LOC100911130	ENSRNOG0000048613	mitochondrial import inner membrane translocase subunit Tim17-B-like Source RGD Symbol Acc 6494590
F09	UPFR1108788	ENSRNOT00000010778.7	Timm22	ENSRNOG0000007988	translocase of inner mitochondrial membrane 22 Source RGD Symbol Acc 68406
F10	UPFR1121404	ENSRNOT00000001409.4	Timm44	ENSRNOG0000001058	translocase of inner mitochondrial membrane 44 Source RGD Symbol Acc 3864

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1117616	ENSRNOT00000015043.7	Timm8a1	ENSRNOG0000011226	translocase of inner mitochondrial membrane 8A1 Source RGD Symbol Acc 621801
F12	UPFR1080026	ENSRNOT00000013188.5	Timm8b	ENSRNOG0000009888	translocase of inner mitochondrial membrane 8 homolog B Source RGD Symbol Acc 619840
G01	UPFR1065819	ENSRNOT00000010871.5	Timm9	ENSRNOG0000008222	translocase of inner mitochondrial membrane 9 Source RGD Symbol Acc 621656
G02	UPFR1034977	ENSRNOT00000019323.5	Tomm22	ENSRNOG0000014058	translocase of outer mitochondrial membrane 22 Source RGD Symbol Acc 1303260
G03	UPFR1055450	ENSRNOT00000040156.4	Tomm34	ENSRNOG0000029799	translocase of outer mitochondrial membrane 34 Source RGD Symbol Acc 1309029
G04	UPFR1083983	ENSRNOT00000025281.2	Tomm40	ENSRNOG0000018556	translocase of outer mitochondrial membrane 40 Source RGD Symbol Acc 1303022
G05	UPFR1013758	ENSRNOT00000004641.3	Tomm40l	ENSRNOG0000003398	translocase of outer mitochondrial membrane 40 like Source RGD Symbol Acc 1562006
G06	UPFR1066054	ENSRNOT00000002238.6	Tomm70	ENSRNOG0000001640	translocase of outer mitochondrial membrane 70 Source RGD Symbol Acc 1303049
G07	UPFR1095007	ENSRNOT00000085115.1	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
G08	UPFR1024850	ENSRNOT00000014089.4	Tspo	ENSRNOG0000010549	translocator protein Source RGD Symbol Acc 2228
G09	UPFR1121701	ENSRNOT00000004900.4	Ucp1	ENSRNOG0000003580	uncoupling protein 1 Source RGD Symbol Acc 3931
G10	UPFR1016940	ENSRNOT00000024156.5	Ucp2	ENSRNOG0000017854	uncoupling protein 2 Source RGD Symbol Acc 3932
G11	UPFR1091274	ENSRNOT00000024005.5	Ucp3	ENSRNOG0000017716	uncoupling protein 3 Source RGD Symbol Acc 3933
G12	UPFR1103671	ENSRNOT00000013476.7	Uxt	ENSRNOG0000009893	ubiquitously-expressed, prefoldin-like chaperone Source RGD Symbol Acc 1359326
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	UPFR1126610	UPL_RGDC	RGDC	UPL_RGDC	Rat 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 $\mu$ 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 Probe RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe 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	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ 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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