

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

## Mouse Nitric Oxide Signaling Pathway

Cat. no. 249955 UPMM-062ZR

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

	1	2	3	4	5	6	7	8	9	10	11	12
A	Aass	Als2	Apoe	Bax	Bcl2l1	Calm1	Capns1	Cat	Cav1	Ccnd1	Cong1	Ccs
B	Cd151	Cdkn1a	Cicf1	Ctsb	Cyba	Ddah1	Ddah2	Dlg4	Dynll1	Egr1	Epx	Ercc2
C	Fas	Fos	Gab1	Gadd45a	Gpx1	Gpx2	Gpx3	Gpx4	Gpx5	Gpx6	Gpx7	Grin1
D	Hmgb1	Hpn	Idh1	Irgm1	Mdm2	Med4	Mpo	Myc	Ncf2	Nedl1	Nos1	Nos2
E	Nos3	Nax1	Nox4	Noxa1	Noxo1	Nudt15	Pea15a	Ppp1r15b	Ppp3ca	Prdx1	Prdx2	Prdx6
F	Prkaca	Prnp	Prpf4	Psmb5	Ptx3	Rb1	Recq4	Rprm	Rras	Rrp1	Scd1	Scd2
G	Scd3	Sfn	Sod1	Sod2	Sod3	Tpo	Trp53	Txnip	Txnd2	Ubc	Ucp3	Xpa
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	UPFM078962 7	ENSMUST00000 031707.13	Aass	ENSMUSG00 000029695	aminoadipate-semialdehyde synthase Source MGI Symbol Acc MGI 1353573
A02	UPFM071103 2	ENSMUST00000 027178.12	Als2	ENSMUSG00 000026024	alsin Rho guanine nucleotide exchange factor Source MGI Symbol Acc MGI 1921268
A03	UPFM092642 1	ENSMUST00000 172808.1	ApoE	ENSMUSG00 000002985	apolipoprotein E Source MGI Symbol Acc MGI 88057
A04	UPFM090386 1	ENSMUST00000 211195.1	Bax	ENSMUSG00 000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
A05	UPFM066341 1	ENSMUST00000 156688.1	Bcl2l1	ENSMUSG00 000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
A06	UPFM068642 1	ENSMUST00000 110082.10	Calm1	ENSMUSG00 000001175	calmodulin 1 Source MGI Symbol Acc MGI 88251
A07	UPFM092549 5	ENSMUST00000 129761.7	Capns1	ENSMUSG00 000001794	calpain, small subunit 1 Source MGI Symbol Acc MGI 88266
A08	UPFM099283 9	ENSMUST00000 028610.9	Cat	ENSMUSG00 000027187	catalase Source MGI Symbol Acc MGI 88271
A09	UPFM094042 8	ENSMUST00000 150901.1	Cav1	ENSMUSG00 000007655	caveolin 1, caveolae protein Source MGI Symbol Acc MGI 102709
A10	UPFM093346 3	ENSMUST00000 208193.1	Ccnd1	ENSMUSG00 000070348	cyclin D1 Source MGI Symbol Acc MGI 88313
A11	UPFM065653 4	ENSMUST00000 020576.7	Ccng1	ENSMUSG00 000020326	cyclin G1 Source MGI Symbol Acc MGI 102890
A12	UPFM101023 3	ENSMUST00000 238136.1	Ccs	ENSMUSG00 000034108	copper chaperone for superoxide dismutase Source MGI Symbol Acc MGI 1333783
B01	UPFM087127 4	ENSMUST00000 210058.1	Cd151	ENSMUSG00 000025510	CD151 antigen Source MGI Symbol Acc MGI 1096360
B02	UPFM086779 1	ENSMUST00000 122348.2	Cdkn1a	ENSMUSG00 000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B03	UPFM063238 3	ENSMUST00000 126457.1	Clcf1	ENSMUSG00 000040663	cardiotrophin-like cytokine factor 1 Source MGI Symbol Acc MGI 1930088
B04	UPFM062902 6	ENSMUST00000 006235.8	Ctsb	ENSMUSG00 000021939	cathepsin B Source MGI Symbol Acc MGI 88561
B05	UPFM066515 3	ENSMUST00000 017604.9	Cyba	ENSMUSG00 000006519	cytochrome b-245, alpha polypeptide Source MGI Symbol Acc MGI 1316658
B06	UPFM085769 1	ENSMUST00000 029845.14	Ddah1	ENSMUSG00 000028194	dimethylarginine dimethylaminohydrolase 1 Source MGI Symbol Acc MGI 1916469
B07	UPFM066466 2	ENSMUST00000 174493.7	Ddah2	ENSMUSG00 000007039	dimethylarginine dimethylaminohydrolase 2 Source MGI Symbol Acc MGI 1859016
B08	UPFM079262 8	ENSMUST00000 123687.2	Dlg4	ENSMUSG00 000020886	discs large MAGUK scaffold protein 4 Source MGI Symbol Acc MGI 1277959
B09	UPFM086473 9	ENSMUST00000 202980.1	Dynll1	ENSMUSG00 000009013	dynein light chain LC8-type 1 Source MGI Symbol Acc MGI 1861457
B10	UPFM085434 3	ENSMUST00000 165033.1	Egr1	ENSMUSG00 000038418	early growth response 1 Source MGI Symbol Acc MGI 95295
B11	UPFM089346 3	ENSMUST00000 125590.1	Epx	ENSMUSG00 000052234	eosinophil peroxidase Source MGI Symbol Acc MGI 107569
B12	UPFM092894 1	ENSMUST00000 128167.1	Ercc2	ENSMUSG00 000030400	excision repair cross-complementing rodent repair deficiency, complementation group 2 Source MGI Symbol Acc MGI 95413
C01	UPFM099578 7	ENSMUST00000 235709.1	Fas	ENSMUSG00 000024778	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
C02	UPFM076456 3	ENSMUST00000 136122.7	Fos	ENSMUSG00 000021250	FBJ osteosarcoma oncogene Source MGI Symbol Acc MGI 95574
C03	UPFM070352 0	ENSMUST00000 034150.9	Gab1	ENSMUSG00 000031714	growth factor receptor bound protein 2-associated protein 1 Source MGI Symbol Acc MGI 108088
C04	UPFM091095 4	ENSMUST00000 204282.1	Gadd45a	ENSMUSG00 000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
C05	UPFM091057 8	ENSMUST00000 193987.1	Gpx1	ENSMUSG00 000063856	glutathione peroxidase 1 Source MGI Symbol Acc MGI 104887
C06	UPFM099994 6	ENSMUST00000 221421.1	Gpx2	ENSMUSG00 000042808	glutathione peroxidase 2 Source MGI Symbol Acc MGI 106609
C07	UPFM087429 4	ENSMUST00000 149324.1	Gpx3	ENSMUSG00 000018339	glutathione peroxidase 3 Source MGI Symbol Acc MGI 105102
C08	UPFM100136 7	ENSMUST00000 183037.1	Gpx4	ENSMUSG00 000075706	glutathione peroxidase 4 Source MGI Symbol Acc MGI 104767
C09	UPFM097898 8	ENSMUST00000 110491.8	Gpx5	ENSMUSG00 000004344	glutathione peroxidase 5 Source MGI Symbol Acc MGI 104886
C10	UPFM085669 1	ENSMUST00000 136668.1	Gpx6	ENSMUSG00 000004341	glutathione peroxidase 6 Source MGI Symbol Acc MGI 1922762
	UPFM117294	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	9	184609.1	Gpx7	000028597	glutathione peroxidase 7 Source MGI Symbol Acc MGI 1914555
C12	UPFM066058 1	ENSMUST00000 114312.1	Grin1	ENSMUSG00 000026959	glutamate receptor, ionotropic, NMDA1 (zeta 1) Source MGI Symbol Acc MGI 95819
D01	UPFM116517 4	ENSMUST00000 110505.7	Hmgb1	ENSMUSG00 000066551	high mobility group box 1 Source MGI Symbol Acc MGI 96113
D02	UPFM097217 3	ENSMUST00000 108102.8	Hpn	ENSMUSG00 000001249	hepsin Source MGI Symbol Acc MGI 1196620
D03	UPFM082820 8	ENSMUST00000 188109.6	ldh1	ENSMUSG00 000025950	isocitrate dehydrogenase 1 (NADP+), soluble Source MGI Symbol Acc MGI 96413
D04	UPFM064502 1	ENSMUST00000 097271.3	lrgm1	ENSMUSG00 000046879	immunity-related GTPase family M member 1 Source MGI Symbol Acc MGI 107567
D05	UPFM075219 5	ENSMUST00000 137102.7	Mdm2	ENSMUSG00 000020184	transformed mouse 3T3 cell double minute 2 Source MGI Symbol Acc MGI 96952
D06	UPFM096883 9	ENSMUST00000 022705.6	Med4	ENSMUSG00 000022109	mediator complex subunit 4 Source MGI Symbol Acc MGI 1914631
D07	UPFM097324 1	ENSMUST00000 121303.7	Mpo	ENSMUSG00 000009350	myeloperoxidase Source MGI Symbol Acc MGI 97137
D08	UPFM081421 4	ENSMUST00000 161976.7	Myc	ENSMUSG00 000022346	myelocytomatosis oncogene Source MGI Symbol Acc MGI 97250
D09	UPFM074112 3	ENSMUST00000 189135.1	Ncf2	ENSMUSG00 000026480	neutrophil cytosolic factor 2 Source MGI Symbol Acc MGI 97284
D10	UPFM073847 8	ENSMUST00000 214417.1	Nedd1	ENSMUSG00 000019988	neural precursor cell expressed, developmentally down-regulated gene 1 Source MGI Symbol Acc MGI 97293
D11	UPFM062234 1	ENSMUST00000 142742.8	Nos1	ENSMUSG00 000029361	nitric oxide synthase 1, neuronal Source MGI Symbol Acc MGI 97360
D12	UPFM076964 2	ENSMUST00000 208783.1	Nos2	ENSMUSG00 000020826	nitric oxide synthase 2, inducible Source MGI Symbol Acc MGI 97361
E01	UPFM067358 1	ENSMUST00000 115090.5	Nos3	ENSMUSG00 000028978	nitric oxide synthase 3, endothelial cell Source MGI Symbol Acc MGI 97362
E02	UPFM099950 5	ENSMUST00000 159231.2	Nox1	ENSMUSG00 000031257	NADPH oxidase 1 Source MGI Symbol Acc MGI 2450016
E03	UPFM093930 8	ENSMUST00000 124269.7	Nox4	ENSMUSG00 000030562	NADPH oxidase 4 Source MGI Symbol Acc MGI 1354184
E04	UPFM085702 7	ENSMUST00000 044018.7	Noxa1	ENSMUSG00 000036805	NADPH oxidase activator 1 Source MGI Symbol Acc MGI 2449980
E05	UPFM063593 6	ENSMUST00000 019464.7	Noxo1	ENSMUSG00 000019320	NADPH oxidase organizer 1 Source MGI Symbol Acc MGI 1919143
E06	UPFM090016 8	ENSMUST00000 043813.2	Nudt15	ENSMUSG00 000033405	nudix (nucleoside diphosphate linked moiety X)-type motif 15 Source MGI Symbol Acc MGI 2443366
E07	UPFM076543 8	ENSMUST00000 152432.1	Pea15a	ENSMUSG00 000013698	phosphoprotein enriched in astrocytes 15A Source MGI Symbol Acc MGI 104799
E08	UPFM091389 1	ENSMUST00000 052529.3	Ppp1r15b	ENSMUSG00 000046062	protein phosphatase 1, regulatory subunit 15B Source MGI Symbol Acc MGI 2444211
E09	UPFM100594 6	ENSMUST00000 070198.13	Ppp3ca	ENSMUSG00 000028161	protein phosphatase 3, catalytic subunit, alpha isoform Source MGI Symbol Acc MGI 107164
E10	UPFM090118 1	ENSMUST00000 129315.7	Prdx1	ENSMUSG00 000028691	peroxiredoxin 1 Source MGI Symbol Acc MGI 99523
E11	UPFM095945 4	ENSMUST00000 127215.1	Prdx2	ENSMUSG00 000005161	peroxiredoxin 2 Source MGI Symbol Acc MGI 109486
E12	UPFM087768 6	ENSMUST00000 155135.1	Prdx6	ENSMUSG00 000026701	peroxiredoxin 6 Source MGI Symbol Acc MGI 894320
F01	UPFM091850 5	ENSMUST00000 211558.1	Prkaca	ENSMUSG00 000005469	protein kinase, cAMP dependent, catalytic, alpha Source MGI Symbol Acc MGI 97592
F02	UPFM088483 3	ENSMUST00000 091288.12	Prnp	ENSMUSG00 000079037	prion protein Source MGI Symbol Acc MGI 97769
F03	UPFM082383 8	ENSMUST00000 084524.3	Prpf4	ENSMUSG00 000066148	pre-mRNA processing factor 4 Source MGI Symbol Acc MGI 1917302
F04	UPFM097934 7	ENSMUST00000 022803.5	Psm5	ENSMUSG00 000022193	proteasome (prosome, macropain) subunit, beta type 5 Source MGI Symbol Acc MGI 1194513
F05	UPFM086991 1	ENSMUST00000 029421.5	Ptx3	ENSMUSG00 000027832	pentraxin related gene Source MGI Symbol Acc MGI 104641
F06	UPFM077278 8	ENSMUST00000 022701.6	Rb1	ENSMUSG00 000022105	RB transcriptional corepressor 1 Source MGI Symbol Acc MGI 97874
F07	UPFM092240 7	ENSMUST00000 230544.1	Recq14	ENSMUSG00 000033762	RecQ protein-like 4 Source MGI Symbol Acc MGI 1931028
F08	UPFM090429 7	ENSMUST00000 100089.2	Rprm	ENSMUSG00 000075334	reprimin, TP53 dependent G2 arrest mediator candidate Source MGI Symbol Acc MGI 1915124
F09	UPFM071992 8	ENSMUST00000 210397.1	Rras	ENSMUSG00 000038387	related RAS viral (r-ras) oncogene Source MGI Symbol Acc MGI 98179
F10	UPFM099289 7	ENSMUST00000 219141.1	Rrp1	ENSMUSG00 000061032	ribosomal RNA processing 1 homolog (S. cerevisiae) Source MGI Symbol Acc MGI 1203500

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM064289 0	ENSMUST00000 236824.1	Scd1	ENSMUSG00 000037071	stearoyl-Coenzyme A desaturase 1 Source MGI Symbol Acc MGI 98239
F12	UPFM087708 5	ENSMUST00000 237039.1	Scd2	ENSMUSG00 000025203	stearoyl-Coenzyme A desaturase 2 Source MGI Symbol Acc MGI 98240
G01	UPFM087966 9	ENSMUST00000 237324.1	Scd3	ENSMUSG00 000025202	stearoyl-coenzyme A desaturase 3 Source MGI Symbol Acc MGI 1353437
G02	UPFM094111 4	ENSMUST00000 057311.3	Sfn	ENSMUSG00 000047281	stratifin Source MGI Symbol Acc MGI 1891831
G03	UPFM092762 0	ENSMUST00000 023707.10	Sod1	ENSMUSG00 000022982	superoxide dismutase 1, soluble Source MGI Symbol Acc MGI 98351
G04	UPFM095033 7	ENSMUST00000 233897.1	Sod2	ENSMUSG00 000006818	superoxide dismutase 2, mitochondrial Source MGI Symbol Acc MGI 98352
G05	UPFM068829 0	ENSMUST00000 101208.5	Sod3	ENSMUSG00 000072941	superoxide dismutase 3, extracellular Source MGI Symbol Acc MGI 103181
G06	UPFM067455 0	ENSMUST00000 021005.14	Tpo	ENSMUSG00 000020673	thyroid peroxidase Source MGI Symbol Acc MGI 98813
G07	UPFM066913 3	ENSMUST00000 171247.7	Trp53	ENSMUSG00 000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G08	UPFM067128 4	ENSMUST00000 074519.12	Txnip	ENSMUSG00 000038393	thioredoxin interacting protein Source MGI Symbol Acc MGI 1889549
G09	UPFM079664 2	ENSMUST00000 115604.7	Txnr2	ENSMUSG00 000075704	thioredoxin reductase 2 Source MGI Symbol Acc MGI 1347023
G10	UPFM085440 8	ENSMUST00000 156249.1	Ubc	ENSMUSG00 000008348	ubiquitin C Source MGI Symbol Acc MGI 98889
G11	UPFM072555 8	ENSMUST00000 128044.7	Ucp3	ENSMUSG00 000032942	uncoupling protein 3 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 1099787
G12	UPFM087790 3	ENSMUST00000 142380.1	Xpa	ENSMUSG00 000028329	xeroderma pigmentosum, complementation group A Source MGI Symbol Acc MGI 99135
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 $\mu$ 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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