

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

## Mouse Nephrotoxicity

Cat. no. 249955 UPMM-094ZA

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
A	A2m	Aass	Abcb1a	Abcc2	Aldh1a1	Angptl4	Anxa5	Atf3	Bhmt	Bmp1	Bmp4	Blg2
B	Calb1	Cat	Ccl3	Ccnd1	Ccng1	Ccs	Cd24a	Cd44	Cdkn1a	Clu	Cp	Cst3
C	Ctss	Cxcl10	Cxcl3	Cyp2c54	Cyp2d22	Ccn1	Egf	Fgb	Fmo2	Fn1	G6pc	G6pdx
D	Gadd45a	Gamt	Gatm	Gc	Ghr	Glul	Gpnmh	Gpx8	Gstk1	Gstp1	Havcr1	Hmox1
E	Hmox2	Hsp90aa1	Idh1	Igf1bp1	Igf1bp3	Ipmk	Klk1	Lcn2	Lgals3	Mcm6	Mgp	Mt1
F	Nox4	Nphs2	Nqo1	Oat	Odc1	Rgn	Rtn4	Scd1	Slc22a1	Slc22a5	Slc22a6	Socs3
G	Sod2	Sod3	Spp1	Sprr1a	Timp1	Tmsb10	Tnfrsf12a	Uchl1	Ugf1a1	Ugf1a6a	Vcam1	Vim
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	UPFM093766 7	ENSMUST00000 032203.8	A2m	ENSMUSG00 000030111	alpha-2-macroglobulin Source MGI Symbol Acc MGI 2449119
A02	UPFM078962 7	ENSMUST00000 031707.13	Aass	ENSMUSG00 000029695	aminoacidpate-semialdehyde synthase Source MGI Symbol Acc MGI 1353573
A03	UPFM078360 9	ENSMUST00000 047753.4	Abcb1a	ENSMUSG00 000040584	ATP-binding cassette, sub-family B (MDR/TAP), member 1A Source MGI Symbol Acc MGI 97570
A04	UPFM098936 3	ENSMUST00000 143553.1	Abcc2	ENSMUSG00 000025194	ATP-binding cassette, sub-family C (CFTR/MRP), member 2 Source MGI Symbol Acc MGI 1352447
A05	UPFM077566 5	ENSMUST00000 225337.2	Aldh1a1	ENSMUSG00 000053279	aldehyde dehydrogenase family 1, subfamily A1 Source MGI Symbol Acc MGI 1353450
A06	UPFM095383 3	ENSMUST00000 174872.1	Angptl4	ENSMUSG00 000002289	angiopoietin-like 4 Source MGI Symbol Acc MGI 1888999
A07	UPFM099844 2	ENSMUST00000 029266.13	Anxa5	ENSMUSG00 000027712	annexin A5 Source MGI Symbol Acc MGI 106008
A08	UPFM099470 5	ENSMUST00000 027941.13	Atf3	ENSMUSG00 000026628	activating transcription factor 3 Source MGI Symbol Acc MGI 109384
A09	UPFM075258 2	ENSMUST00000 124193.1	Bhmt	ENSMUSG00 000074768	betaine-homocysteine methyltransferase Source MGI Symbol Acc MGI 1339972
A10	UPFM075622 5	ENSMUST00000 227944.1	Bmp1	ENSMUSG00 000022098	bone morphogenetic protein 1 Source MGI Symbol Acc MGI 88176
A11	UPFM097472 7	ENSMUST00000 100676.2	Bmp4	ENSMUSG00 000021835	bone morphogenetic protein 4 Source MGI Symbol Acc MGI 88180
A12	UPFM082779 6	ENSMUST00000 020692.6	Btg2	ENSMUSG00 000020423	B cell translocation gene 2, anti-proliferative Source MGI Symbol Acc MGI 108384
B01	UPFM086752 3	ENSMUST00000 136266.1	Calb1	ENSMUSG00 000028222	calbindin 1 Source MGI Symbol Acc MGI 88248
B02	UPFM099283 9	ENSMUST00000 028610.9	Cat	ENSMUSG00 000027187	catalase Source MGI Symbol Acc MGI 88271
B03	UPFM100418 5	ENSMUST00000 001008.5	Ccl3	ENSMUSG00 000000982	chemokine (C-C motif) ligand 3 Source MGI Symbol Acc MGI 98260
B04	UPFM093346 3	ENSMUST00000 208193.1	Ccnd1	ENSMUSG00 000070348	cyclin D1 Source MGI Symbol Acc MGI 88313
B05	UPFM065653 4	ENSMUST00000 020576.7	Ccng1	ENSMUSG00 000020326	cyclin G1 Source MGI Symbol Acc MGI 102890
B06	UPFM101023 3	ENSMUST00000 238136.1	Ccs	ENSMUSG00 000034108	copper chaperone for superoxide dismutase Source MGI Symbol Acc MGI 1333783
B07	UPFM082206 2	ENSMUST00000 214476.1	Cd24a	ENSMUSG00 000047139	CD24a antigen Source MGI Symbol Acc MGI 88323
B08	UPFM095220 9	ENSMUST00000 111192.2	Cd44	ENSMUSG00 000005087	CD44 antigen Source MGI Symbol Acc MGI 88338
B09	UPFM086779 1	ENSMUST00000 122348.2	Cdkn1a	ENSMUSG00 000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B10	UPFM093808 7	ENSMUST00000 153460.7	Clu	ENSMUSG00 000022037	clusterin Source MGI Symbol Acc MGI 88423
B11	UPFM097899 3	ENSMUST00000 108325.8	Cp	ENSMUSG00 000003617	ceruloplasmin Source MGI Symbol Acc MGI 88476
B12	UPFM073611 7	ENSMUST00000 028938.6	Cst3	ENSMUSG00 000027447	cystatin C Source MGI Symbol Acc MGI 102519
C01	UPFM067305 8	ENSMUST00000 015667.8	Ctss	ENSMUSG00 000038642	cathepsin S Source MGI Symbol Acc MGI 107341
C02	UPFM098980 6	ENSMUST00000 038816.12	Cxcl10	ENSMUSG00 000034855	chemokine (C-X-C motif) ligand 10 Source MGI Symbol Acc MGI 1352450
C03	UPFM117294 8	ENSMUST00000 031326.9	Cxcl3	ENSMUSG00 000029379	chemokine (C-X-C motif) ligand 3 Source MGI Symbol Acc MGI 3037818
C04	UPFM069273 9	ENSMUST00000 048959.4	Cyp2c54	ENSMUSG00 000067225	cytochrome P450, family 2, subfamily c, polypeptide 54 Source MGI Symbol Acc MGI 3642960
C05	UPFM096860 7	ENSMUST00000 230663.1	Cyp2d22	ENSMUSG00 000061740	cytochrome P450, family 2, subfamily d, polypeptide 22 Source MGI Symbol Acc MGI 1929474
C06	UPFM077564 6	ENSMUST00000 029846.4	Ccn1	ENSMUSG00 000028195	cellular communication network factor 1 Source MGI Symbol Acc MGI 88613
C07	UPFM092572 5	ENSMUST00000 199615.4	Egf	ENSMUSG00 000028017	epidermal growth factor Source MGI Symbol Acc MGI 95290
C08	UPFM097441 1	ENSMUST00000 048246.4	Fgb	ENSMUSG00 000033831	fibrinogen beta chain Source MGI Symbol Acc MGI 99501
C09	UPFM095565 5	ENSMUST00000 194061.1	Fmo2	ENSMUSG00 000040170	flavin containing monooxygenase 2 Source MGI Symbol Acc MGI 1916776
C10	UPFM086511 0	ENSMUST00000 188894.6	Fn1	ENSMUSG00 000026193	fibronectin 1 Source MGI Symbol Acc MGI 95566
	UPFM069116	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	4	019469.2	G6pc	000078650	glucose-6-phosphatase, catalytic Source MGI Symbol Acc MGI 95607
C12	UPFM084493 2	ENSMUST00000 143521.1	G6pdx	ENSMUSG00 000031400	glucose-6-phosphate dehydrogenase X-linked Source MGI Symbol Acc MGI 105979
D01	UPFM091095 4	ENSMUST00000 204282.1	Gadd45a	ENSMUSG00 000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
D02	UPFM079058 3	ENSMUST00000 020359.6	Gamt	ENSMUSG00 000020150	guanidinoacetate methyltransferase Source MGI Symbol Acc MGI 1098221
D03	UPFM067739 3	ENSMUST00000 154598.7	Galm	ENSMUSG00 000027199	glycine amidinotransferase (L-arginine glycine amidinotransferase) Source MGI Symbol Acc MGI 1914342
D04	UPFM082255 6	ENSMUST00000 200534.1	Gc	ENSMUSG00 000035540	vitamin D binding protein Source MGI Symbol Acc MGI 95669
D05	UPFM079187 0	ENSMUST00000 161770.1	Ghr	ENSMUSG00 000055737	growth hormone receptor Source MGI Symbol Acc MGI 95708
D06	UPFM072447 1	ENSMUST00000 140685.2	Glul	ENSMUSG00 000026473	glutamate-ammonia ligase (glutamine synthetase) Source MGI Symbol Acc MGI 95739
D07	UPFM087659 0	ENSMUST00000 204260.1	Gpnmb	ENSMUSG00 000029816	glycoprotein (transmembrane) nmb Source MGI Symbol Acc MGI 1934765
D08	UPFM066328 5	ENSMUST00000 231962.1	Gpx8	ENSMUSG00 000021760	glutathione peroxidase 8 (putative) Source MGI Symbol Acc MGI 1916840
D09	UPFM087234 5	ENSMUST00000 204792.1	Gstk1	ENSMUSG00 000029864	glutathione S-transferase kappa 1 Source MGI Symbol Acc MGI 1923513
D10	UPFM078306 5	ENSMUST00000 237893.1	Gstp1	ENSMUSG00 000060803	glutathione S-transferase, pi 1 Source MGI Symbol Acc MGI 95865
D11	UPFM089414 5	ENSMUST00000 109223.7	Havcr1	ENSMUSG00 000040405	hepatitis A virus cellular receptor 1 Source MGI Symbol Acc MGI 2159680
D12	UPFM070898 7	ENSMUST00000 005548.7	Hmox1	ENSMUSG00 000005413	heme oxygenase 1 Source MGI Symbol Acc MGI 96163
E01	UPFM075386 0	ENSMUST00000 140367.7	Hmox2	ENSMUSG00 000004070	heme oxygenase 2 Source MGI Symbol Acc MGI 109373
E02	UPFM099789 5	ENSMUST00000 155242.7	Hsp90aa1	ENSMUSG00 000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
E03	UPFM082820 8	ENSMUST00000 188109.6	ldh1	ENSMUSG00 000025950	isocitrate dehydrogenase 1 (NADP+), soluble Source MGI Symbol Acc MGI 96413
E04	UPFM064388 5	ENSMUST00000 020704.7	Igfbp1	ENSMUSG00 000020429	insulin-like growth factor binding protein 1 Source MGI Symbol Acc MGI 96436
E05	UPFM096898 6	ENSMUST00000 020702.10	Igfbp3	ENSMUSG00 000020427	insulin-like growth factor binding protein 3 Source MGI Symbol Acc MGI 96438
E06	UPFM068170 5	ENSMUST00000 079252.12	Ipmk	ENSMUSG00 000060733	inositol polyphosphate multikinase Source MGI Symbol Acc MGI 1916968
E07	UPFM061769 1	ENSMUST00000 206144.1	Klk1	ENSMUSG00 000063903	kallikrein 1 Source MGI Symbol Acc MGI 102850
E08	UPFM068576 0	ENSMUST00000 147219.1	Lcn2	ENSMUSG00 000026822	lipocalin 2 Source MGI Symbol Acc MGI 96757
E09	UPFM084108 3	ENSMUST00000 146468.3	Lgals3	ENSMUSG00 000050335	lectin, galactose binding, soluble 3 Source MGI Symbol Acc MGI 96778
E10	UPFM090297 7	ENSMUST00000 191454.1	Mcm6	ENSMUSG00 000026355	minichromosome maintenance complex component 6 Source MGI Symbol Acc MGI 1298227
E11	UPFM088612 0	ENSMUST00000 032342.2	Mgp	ENSMUSG00 000030218	matrix Gla protein Source MGI Symbol Acc MGI 96976
E12	UPFM063465 5	ENSMUST00000 211807.1	Mt1	ENSMUSG00 000031765	metallothionein 1 Source MGI Symbol Acc MGI 97171
F01	UPFM093930 8	ENSMUST00000 124269.7	Nox4	ENSMUSG00 000030562	NADPH oxidase 4 Source MGI Symbol Acc MGI 1354184
F02	UPFM086869 2	ENSMUST00000 193020.1	Nphs2	ENSMUSG00 000026602	nephrosis 2, podocin Source MGI Symbol Acc MGI 2157018
F03	UPFM063067 7	ENSMUST00000 003947.8	Nqo1	ENSMUSG00 000003849	NAD(P)H dehydrogenase, quinone 1 Source MGI Symbol Acc MGI 103187
F04	UPFM090004 3	ENSMUST00000 084500.7	Oat	ENSMUSG00 000030934	ornithine aminotransferase Source MGI Symbol Acc MGI 97394
F05	UPFM075025 3	ENSMUST00000 222617.1	Odc1	ENSMUSG00 000011179	ornithine decarboxylase, structural 1 Source MGI Symbol Acc MGI 97402
F06	UPFM069862 0	ENSMUST00000 023832.6	Rgn	ENSMUSG00 000023070	regucalcin Source MGI Symbol Acc MGI 108024
F07	UPFM089016 2	ENSMUST00000 156217.7	Rtn4	ENSMUSG00 000020458	reticulin 4 Source MGI Symbol Acc MGI 1915835
F08	UPFM064289 0	ENSMUST00000 236824.1	Scd1	ENSMUSG00 000037071	stearoyl-Coenzyme A desaturase 1 Source MGI Symbol Acc MGI 98239
F09	UPFM099417 3	ENSMUST00000 024596.9	Slc22a1	ENSMUSG00 000023829	solute carrier family 22 (organic cation transporter), member 1 Source MGI Symbol Acc MGI 108111
F10	UPFM090958 9	ENSMUST00000 019044.7	Slc22a5	ENSMUSG00 000018900	solute carrier family 22 (organic cation transporter), member 5 Source MGI Symbol Acc MGI 1329012

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM074853 8	ENSMUST00000 010250.3	Slc22a6	ENSMUSG00 000024650	solute carrier family 22 (organic anion transporter), member 6 Source MGI Symbol Acc MGI 892001
F12	UPFM069413 9	ENSMUST00000 054002.3	Socs3	ENSMUSG00 000053113	suppressor of cytokine signaling 3 Source MGI Symbol Acc MGI 1201791
G01	UPFM095033 7	ENSMUST00000 233897.1	Sod2	ENSMUSG00 000006818	superoxide dismutase 2, mitochondrial Source MGI Symbol Acc MGI 98352
G02	UPFM068829 0	ENSMUST00000 101208.5	Sod3	ENSMUSG00 000072941	superoxide dismutase 3, extracellular Source MGI Symbol Acc MGI 103181
G03	UPFM075924 9	ENSMUST00000 112746.7	Spp1	ENSMUSG00 000029304	secreted phosphoprotein 1 Source MGI Symbol Acc MGI 98389
G04	UPFM083780 6	ENSMUST00000 054599.7	Sprr1a	ENSMUSG00 000050359	small proline-rich protein 1A Source MGI Symbol Acc MGI 106660
G05	UPFM079676 3	ENSMUST00000 009530.4	Timp1	ENSMUSG00 000001131	tissue inhibitor of metalloproteinase 1 Source MGI Symbol Acc MGI 98752
G06	UPFM069081 6	ENSMUST00000 114049.1	Tmsb10	ENSMUSG00 000079523	thymosin, beta 10 Source MGI Symbol Acc MGI 109146
G07	UPFM065452 3	ENSMUST00000 233040.1	Tnfrsf12a	ENSMUSG00 000023905	tumor necrosis factor receptor superfamily, member 12a Source MGI Symbol Acc MGI 1351484
G08	UPFM080966 9	ENSMUST00000 031131.10	Uchl1	ENSMUSG00 000029223	ubiquitin carboxy-terminal hydrolase L1 Source MGI Symbol Acc MGI 103149
G09	UPFM087958 4	ENSMUST00000 073049.6	Ugt1a1	ENSMUSG00 000089960	UDP glucuronosyltransferase 1 family, polypeptide A1 Source MGI Symbol Acc MGI 98898
G10	UPFM079541 4	ENSMUST00000 014263.5	Ugt1a6a	ENSMUSG00 000054545	UDP glucuronosyltransferase 1 family, polypeptide A6A Source MGI Symbol Acc MGI 2137698
G11	UPFM083873 5	ENSMUST00000 029574.12	Vcam1	ENSMUSG00 000027962	vascular cell adhesion molecule 1 Source MGI Symbol Acc MGI 98926
G12	UPFM099766 2	ENSMUST00000 028062.7	Vim	ENSMUSG00 000026728	vimentin Source MGI Symbol Acc MGI 98932
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.

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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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