

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

## Rat Nephrotoxicity

Cat. no. 249955 UPRN-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
<b>A</b>	LOC1009115 45	Aass	Abcb1a	Abcc2	Aldh1a1	Angptl4	Anxa5	Aif3	Bhmt	Bmp1	Bmp4	Blg2
<b>B</b>	Calb1	Cat	Ccl3	Ccnd1	Ccng1	Ccs	Cd24	Cd44	Cdkn1a	Clu	Cp	Cst3
<b>C</b>	Cts	Cxcl1	Cxcl10	Cyp2c11	Cyp2d4	Ccn1	Egf	Fgb	Fmo2	Fn1	G6pc	G6pd
<b>D</b>	Gadd45a	Gamt	Gatm	Gc	Ghr	Glul	Gpnm3	Gpx8	Gstk1	Gstp1	Havcr1	Hmox1
<b>E</b>	Hmox2	Hsp90aa1	Idh1	Igf1bp1	Igf1bp3	Ipmk	Klk1	Lcn2	Lgals3	Mcm6	Mgp	AC128848.1
<b>F</b>	Nox4	Nphs2	Nqo1	Oat	Odc1	Rgn	Rtn4	Scd2	Slc22a1	Slc22a5	Slc22a6	Socs3
<b>G</b>	Sod2	Sod3	Spp1	Sprr1a	Timp1	LOC1003644 35	Tnfrsf12a	Uchl1	Ugt1a3	Cxcl3	Vcam1	Vim
<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	UPFR1057650	ENSRNOT00000019346.6	LOC100911545	ENSRNOG0000028896	alpha-2-macroglobulin-like Source RGD Symbol Acc 6492449
A02	UPFR1017405	ENSRNOT00000060530.4	Aass	ENSRNOG0000039494	aminoadipate-semialdehyde synthase Source RGD Symbol Acc 1310811
A03	UPFR1045141	ENSRNOT00000037712.5	Abcb1a	ENSRNOG0000008012	ATP binding cassette subfamily B member 4 Source RGD Symbol Acc 620248
A04	UPFR1015892	ENSRNOT00000070861.2	Abcc2	ENSRNOG0000046727	ATP binding cassette subfamily C member 2 Source RGD Symbol Acc 2366
A05	UPFR1084336	ENSRNOT00000024000.6	Aldh1a1	ENSRNOG0000017619	aldehyde dehydrogenase 1 family, member A1 Source RGD Symbol Acc 2087
A06	UPFR1032714	ENSRNOT00000010031.6	Angptl4	ENSRNOG0000007545	angiopoietin-like 4 Source RGD Symbol Acc 735058
A07	UPFR1079810	ENSRNOT00000019554.6	Anxa5	ENSRNOG0000014453	annexin A5 Source RGD Symbol Acc 2120
A08	UPFR1089208	ENSRNOT00000005085.3	Atf3	ENSRNOG0000003745	activating transcription factor 3 Source RGD Symbol Acc 2165
A09	UPFR1057399	ENSRNOT00000015336.3	Bhmt	ENSRNOG0000011200	betaine-homocysteine S-methyltransferase Source RGD Symbol Acc 621496
A10	UPFR1057170	ENSRNOT00000046054.4	Bmp1	ENSRNOG0000010890	bone morphogenetic protein 1 Source RGD Symbol Acc 620739
A11	UPFR1013450	ENSRNOT00000083268.1	Bmp4	ENSRNOG0000009694	bone morphogenetic protein 4 Source RGD Symbol Acc 2213
A12	UPFR1061715	ENSRNOT00000004408.3	Btg2	ENSRNOG0000003300	BTG anti-proliferation factor 2 Source RGD Symbol Acc 2225
B01	UPFR1074049	ENSRNOT00000010845.4	Calb1	ENSRNOG0000007456	calbindin 1 Source RGD Symbol Acc 69340
B02	UPFR1119733	ENSRNOT00000011230.5	Cat	ENSRNOG0000008364	catalase Source RGD Symbol Acc 2279
B03	UPFR1057376	ENSRNOT00000015139.3	Ccl3	ENSRNOG0000011205	C-C motif chemokine ligand 3 Source RGD Symbol Acc 3647
B04	UPFR1042457	ENSRNOT00000088588.1	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B05	UPFR1113303	ENSRNOT00000079646.1	Ccng1	ENSRNOG0000003256	cyclin G1 Source RGD Symbol Acc 2295
B06	UPFR1035526	ENSRNOT00000073983.2	Ccs	ENSRNOG0000047816	copper chaperone for superoxide dismutase Source RGD Symbol Acc 620403
B07	UPFR1028641	ENSRNOT00000000352.5	Cd24	ENSRNOG0000000321	CD24 molecule Source RGD Symbol Acc 2298
B08	UPFR1040363	ENSRNOT00000009073.7	Cd44	ENSRNOG0000006094	CD44 molecule (Indian blood group) Source RGD Symbol Acc 2307
B09	UPFR1028644	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B10	UPFR1050205	ENSRNOT00000091612.1	Clu	ENSRNOG0000016460	clusterin Source RGD Symbol Acc 3907
B11	UPFR1067896	ENSRNOT00000016083.5	Cp	ENSRNOG0000011913	ceruloplasmin Source RGD Symbol Acc 2387
B12	UPFR1023508	ENSRNOT00000007175.6	Cst3	ENSRNOG0000005195	cystatin C Source RGD Symbol Acc 2432
C01	UPFR1035779	ENSRNOT00000028732.7	Ctss	ENSRNOG0000021157	cathepsin S Source RGD Symbol Acc 621513
C02	UPFR1056296	ENSRNOT00000003778.3	Cxcl1	ENSRNOG0000002802	C-X-C motif chemokine ligand 1 Source RGD Symbol Acc 619869
C03	UPFR1049597	ENSRNOT00000003075.7	Cxcl10	ENSRNOG0000022256	C-X-C motif chemokine ligand 10 Source RGD Symbol Acc 620209
C04	UPFR1118173	ENSRNOT00000088853.1	Cyp2c11	ENSRNOG0000052810	cytochrome P450, subfamily 2, polypeptide 11 Source RGD Symbol Acc 2469
C05	UPFR1014363	ENSRNOT00000011880.6	Cyp2d4	ENSRNOG0000032261	cytochrome P450, family 2, subfamily d, polypeptide 4 Source RGD Symbol Acc 620640
C06	UPFR1080474	ENSRNOT00000019501.4	Ccn1	ENSRNOG0000014350	cellular communication network factor 1 Source RGD Symbol Acc 620763
C07	UPFR1045222	ENSRNOT00000087007.1	Egf	ENSRNOG0000053979	epidermal growth factor Source RGD Symbol Acc 2542
C08	UPFR1075212	ENSRNOT00000009813.3	Fgb	ENSRNOG0000007092	fibrinogen beta chain Source RGD Symbol Acc 2604
C09	UPFR1095257	ENSRNOT00000091389.1	Fmo2	ENSRNOG0000003510	flavin containing monooxygenase 2 Source RGD Symbol Acc 628600
C10	UPFR1089380	ENSRNOT00000057585.4	Fn1	ENSRNOG0000014288	fibronectin 1 Source RGD Symbol Acc 2624
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1020583	085831.1	G6pc	000051171	glucose-6-phosphatase, catalytic subunit Source RGD Symbol Acc 2644
C12	UPFR1120389	ENSRNOT00000080887.1	G6pd	ENSRNOG0000056728	glucose-6-phosphate dehydrogenase Source RGD Symbol Acc 2645
D01	UPFR1092990	ENSRNOT00000007698.6	Gadd45a	ENSRNOG0000005615	growth arrest and DNA-damage-inducible, alpha Source RGD Symbol Acc 2654
D02	UPFR1038035	ENSRNOT00000028969.4	Gamt	ENSRNOG0000024577	guanidinoacetate N-methyltransferase Source RGD Symbol Acc 2659
D03	UPFR1043905	ENSRNOT00000000181.4	Galm	ENSRNOG0000000168	glycine amidinotransferase Source RGD Symbol Acc 71090
D04	UPFR1064930	ENSRNOT00000004174.4	Gc	ENSRNOG0000003119	GC, vitamin D binding protein Source RGD Symbol Acc 2667
D05	UPFR1025911	ENSRNOT00000046951.5	Ghr	ENSRNOG0000015654	growth hormone receptor Source RGD Symbol Acc 2687
D06	UPFR1034243	ENSRNOT00000075480.2	Glul	ENSRNOG0000049560	glutamate-ammonia ligase Source RGD Symbol Acc 2710
D07	UPFR1049985	ENSRNOT00000011945.4	Gpnm	ENSRNOG0000008816	glycoprotein nmb Source RGD Symbol Acc 71008
D08	UPFR1118211	ENSRNOT00000013979.5	Gpx8	ENSRNOG0000010461	glutathione peroxidase 8 Source RGD Symbol Acc 1307506
D09	UPFR1022537	ENSRNOT00000022275.4	Gstk1	ENSRNOG0000016484	glutathione S-transferase kappa 1 Source RGD Symbol Acc 735188
D10	UPFR1075260	ENSRNOT00000024601.4	Gstp1	ENSRNOG0000018237	glutathione S-transferase pi 1 Source RGD Symbol Acc 2758
D11	UPFR1081068	ENSRNOT00000009573.6	Havcr1	ENSRNOG0000007243	hepatitis A virus cellular receptor 1 Source RGD Symbol Acc 708425
D12	UPFR1040868	ENSRNOT00000019192.6	Hmx1	ENSRNOG0000014117	heme oxygenase 1 Source RGD Symbol Acc 2806
E01	UPFR1064114	ENSRNOT00000005031.5	Hmx2	ENSRNOG0000003773	heme oxygenase 2 Source RGD Symbol Acc 67402
E02	UPFR1014170	ENSRNOT000000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
E03	UPFR1044022	ENSRNOT00000020322.5	ldh1	ENSRNOG0000015020	isocitrate dehydrogenase (NADP(+)) 1, cytosolic Source RGD Symbol Acc 2862
E04	UPFR1053345	ENSRNOT00000077177.1	Igfbp1	ENSRNOG0000058780	insulin-like growth factor binding protein 1 Source RGD Symbol Acc 2872
E05	UPFR1013429	ENSRNOT000000088355.1	Igfbp3	ENSRNOG0000061910	insulin-like growth factor binding protein 3 Source RGD Symbol Acc 2874
E06	UPFR1087924	ENSRNOT00000000748.3	Ipmk	ENSRNOG0000000609	inositol polyphosphate multikinase Source RGD Symbol Acc 620954
E07	UPFR1015545	ENSRNOT000000091964.1	Klk1	ENSRNOG0000032857	kallikrein 1-related peptidase C9 Source RGD Symbol Acc 727805
E08	UPFR1029205	ENSRNOT00000018776.5	Lcn2	ENSRNOG0000013973	lipocalin 2 Source RGD Symbol Acc 69408
E09	UPFR1085057	ENSRNOT00000014216.5	Lgals3	ENSRNOG0000010645	galectin 3 Source RGD Symbol Acc 69356
E10	UPFR1051840	ENSRNOT00000004969.6	Mcm6	ENSRNOG0000003703	minichromosome maintenance complex component 6 Source RGD Symbol Acc 61967
E11	UPFR1099701	ENSRNOT00000007577.5	Mgp	ENSRNOG0000005695	matrix Gla protein Source RGD Symbol Acc 3088
E12	UPFR1094214	ENSRNOT000000038212.5	AC128848.1	ENSRNOG0000025764	
F01	UPFR1087720	ENSRNOT00000018990.6	Nox4	ENSRNOG0000013925	NADPH oxidase 4 Source RGD Symbol Acc 620600
F02	UPFR1045444	ENSRNOT000000005425.6	Nphs2	ENSRNOG0000004030	NPHS2, podocin Source RGD Symbol Acc 620461
F03	UPFR1111217	ENSRNOT00000017174.5	Nqo1	ENSRNOG0000012772	NAD(P)H quinone dehydrogenase 1 Source RGD Symbol Acc 2503
F04	UPFR1065928	ENSRNOT00000022628.5	Oat	ENSRNOG0000016807	ornithine aminotransferase Source RGD Symbol Acc 621724
F05	UPFR1021756	ENSRNOT00000079185.1	Odc1	ENSRNOG0000005424	ornithine decarboxylase 1 Source RGD Symbol Acc 3227
F06	UPFR1067759	ENSRNOT00000010984.5	Rgn	ENSRNOG0000007949	regucalcin Source RGD Symbol Acc 3560
F07	UPFR1058760	ENSRNOT000000006443.7	Rtn4	ENSRNOG0000004621	reticulon 4 Source RGD Symbol Acc 620989
F08	UPFR1085793	ENSRNOT00000075397.1	Scd2	ENSRNOG0000046005	stearoyl-Coenzyme A desaturase 2 Source RGD Symbol Acc 621177
F09	UPFR1013459	ENSRNOT00000022254.5	Slc22a1	ENSRNOG0000016337	solute carrier family 22 member 1 Source RGD Symbol Acc 3224
F10	UPFR1087896	ENSRNOT000000081898.1	Slc22a5	ENSRNOG0000008432	solute carrier family 22 member 5 Source RGD Symbol Acc 3702

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1096502	ENSRNOT00000024757.4	Slc22a6	ENSRNOG0000018215	solute carrier family 22 member 6 Source RGD Symbol Acc 69338
F12	UPFR1069728	ENSRNOT00000003940.3	Socs3	ENSRNOG0000002946	suppressor of cytokine signaling 3 Source RGD Symbol Acc 621087
G01	UPFR1090502	ENSRNOT00000025794.4	Sod2	ENSRNOG0000019048	superoxide dismutase 2 Source RGD Symbol Acc 3732
G02	UPFR1098616	ENSRNOT00000005155.3	Sod3	ENSRNOG0000003869	superoxide dismutase 3 Source RGD Symbol Acc 3733
G03	UPFR1100110	ENSRNOT00000067875.4	Spp1	ENSRNOG0000043451	secreted phosphoprotein 1 Source RGD Symbol Acc 3752
G04	UPFR1051774	ENSRNOT00000012174.7	Spr1a	ENSRNOG0000024028	small proline-rich protein 1A Source RGD Symbol Acc 1593163
G05	UPFR1060230	ENSRNOT00000013745.7	Timp1	ENSRNOG0000010208	TIMP metalloproteinase inhibitor 1 Source RGD Symbol Acc 621675
G06	UPFR1018952	ENSRNOT00000041880.3	LOC100364435	ENSRNOG0000042499	thymosin, beta 10-like Source RGD Symbol Acc 2321025
G07	UPFR1074434	ENSRNOT00000004842.5	Tnfrsf12a	ENSRNOG0000003546	TNF receptor superfamily member 12A Source RGD Symbol Acc 631329
G08	UPFR1110967	ENSRNOT00000003248.5	Uchl1	ENSRNOG0000002343	ubiquitin C-terminal hydrolase L1 Source RGD Symbol Acc 3928
G09	UPFR1060830	ENSRNOT00000025652.8	Ugt1a3	ENSRNOG0000018740	UDP glycosyltransferase 1 family, polypeptide A3 Source RGD Symbol Acc 1549728
G10	UPFR1076775	ENSRNOT00000034090.3	Cxcl3	ENSRNOG0000028043	chemokine (C-X-C motif) ligand 3 Source RGD Symbol Acc 621812
G11	UPFR1101375	ENSRNOT00000019377.5	Vcam1	ENSRNOG0000014333	vascular cell adhesion molecule 1 Source RGD Symbol Acc 3952
G12	UPFR1091277	ENSRNOT00000024430.5	Vim	ENSRNOG0000018087	vimentin Source RGD Symbol Acc 621646
H01	UPFR1132952	ENSRNOT000000080216.1	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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