

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

## Rat Molecular Toxicology PathwayFinder

Cat. no. 249955 UPRN-401ZA

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	Abcb1a	Abcc2	Abcc3	Acadm	Acadvl	Acox1	Adh1	Adm2	Akr1c2	Akt1	Armdc3	Asah1
B	Asb1	Asns	Atm	Atp8b1	Bcl2	Bcl2l1	Brc1	Casp8	Casp9	RGD1565355	Cdkn1a	Cpt1a
C	Cpt1b	Cpt2	Cyb561d1	Cyld	Cyp1a1	Cyp1a2	Cyp2d4	Cyp2e1	Cyp3a18	Dnajb1	Dnajb9	Erc2
D	F2	Faslg	Fasn	Fhl2	Gclm	Grb2	Herpud1	Hmox1	Hpn	Hpx	Hsf1	Hsp90b1
E	Hspa1a	Edn1	Hspa4	Hspa5	Hspb1	Hspd1	Inhbe	Lpl	Lss	Lyz2	Mag	Mdm2
F	Mefap2	Mki67	Ncoa7	Nqo1	Nr5a2	Slc51a	Parp2	Pdyn	Ppara	PVR	Rad51	Rdx
G	Scd	LOC299282	Slc25a25	LOC1009095 95	Slc7a11	Sreb1	Tagln	Trib3	Trim10	Txn14b	Uhrf1	Wipi1
H	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	UPFR1045141	ENSRNOT00000037712.5	Abcb1a	ENSRNOG0000008012	ATP binding cassette subfamily B member 4 Source RGD Symbol Acc 620248
A02	UPFR1015892	ENSRNOT00000070861.2	Abcc2	ENSRNOG0000046727	ATP binding cassette subfamily C member 2 Source RGD Symbol Acc 2366
A03	UPFR1023753	ENSRNOT00000003977.6	Abcc3	ENSRNOG0000002948	ATP binding cassette subfamily C member 3 Source RGD Symbol Acc 71101
A04	UPFR1090017	ENSRNOT00000013238.3	Acadm	ENSRNOG0000009845	acyl-CoA dehydrogenase medium chain Source RGD Symbol Acc 2012
A05	UPFR1056845	ENSRNOT00000024973.6	Acadvl	ENSRNOG0000018114	acyl-CoA dehydrogenase, very long chain Source RGD Symbol Acc 2014
A06	UPFR1092066	ENSRNOT00000046754.5	Acox1	ENSRNOG0000008755	acyl-CoA oxidase 1 Source RGD Symbol Acc 619757
A07	UPFR1120480	ENSRNOT00000036993.4	Adh1	ENSRNOG0000012436	alcohol dehydrogenase 6 (class V) Source RGD Symbol Acc 1306313
A08	UPFR1015317	ENSRNOT00000044854.2	Adm2	ENSRNOG0000029830	adrenomedullin 2 Source RGD Symbol Acc 1302971
A09	UPFR1108399	ENSRNOT00000051342.4	Akr1c2	ENSRNOG0000029844	aldo-keto reductase family 1, member C2 Source RGD Symbol Acc 1311841
A10	UPFR1083196	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A11	UPFR1107176	ENSRNOT00000072849.2	Arrdc3	ENSRNOG0000045649	arrestin domain containing 3 Source RGD Symbol Acc 1359478
A12	UPFR1105025	ENSRNOT00000013463.4	Asah1	ENSRNOG0000010034	N-acylsphingosine amidohydrolase 1 Source RGD Symbol Acc 621568
B01	UPFR1078624	ENSRNOT00000027528.5	Asb1	ENSRNOG0000020322	ankyrin repeat and SOCS box-containing 1 Source RGD Symbol Acc 1310760
B02	UPFR1107200	ENSRNOT00000010079.4	Asns	ENSRNOG0000007546	asparagine synthetase (glutamine-hydrolyzing) Source RGD Symbol Acc 2162
B03	UPFR1064948	ENSRNOT00000086812.1	Atm	ENSRNOG0000029773	ATM serine/threonine kinase Source RGD Symbol Acc 1593265
B04	UPFR1071046	ENSRNOT00000038652.5	Atp8b1	ENSRNOG0000024952	ATPase phospholipid transporting 8B1 Source RGD Symbol Acc 1308488
B05	UPFR1082998	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
B06	UPFR1047186	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
B07	UPFR1018614	ENSRNOT00000083111.1	Brcal	ENSRNOG0000020701	BRCA1, DNA repair associated Source RGD Symbol Acc 2218
B08	UPFR1030636	ENSRNOT00000016613.4	Casp8	ENSRNOG0000012331	caspase 8 Source RGD Symbol Acc 620945
B09	UPFR1054782	ENSRNOT00000085378.1	Casp9	ENSRNOG0000012944	caspase 9 Source RGD Symbol Acc 61867
B10	UPFR1013797	ENSRNOT00000008319.8	RGD1565355	ENSRNOG0000040108	similar to fatty acid translocase/CD36 Source RGD Symbol Acc 1565355
B11	UPFR1028644	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B12	UPFR1101909	ENSRNOT00000019652.3	Cpt1a	ENSRNOG0000014254	carnitine palmitoyltransferase 1A Source RGD Symbol Acc 2396
C01	UPFR1021462	ENSRNOT00000013985.3	Cpt1b	ENSRNOG0000010438	carnitine palmitoyltransferase 1B Source RGD Symbol Acc 2397
C02	UPFR1106957	ENSRNOT00000016954.3	Cptf2	ENSRNOG0000012443	carnitine palmitoyltransferase 2 Source RGD Symbol Acc 2398
C03	UPFR1027937	ENSRNOT00000087329.1	Cyb561d1	ENSRNOG0000052232	cytochrome b561 family, member D1 Source RGD Symbol Acc 1310829
C04	UPFR1107889	ENSRNOT00000018888.7	Cyld	ENSRNOG0000014048	CYLD lysine 63 deubiquitinase Source RGD Symbol Acc 1308346
C05	UPFR1063695	ENSRNOT00000026473.4	Cyp1a1	ENSRNOG0000019500	cytochrome P450, family 1, subfamily a, polypeptide 1 Source RGD Symbol Acc 2458
C06	UPFR1096006	ENSRNOT00000021653.7	Cyp1a2	ENSRNOG0000016173	cytochrome P450, family 1, subfamily a, polypeptide 2 Source RGD Symbol Acc 2459
C07	UPFR1014363	ENSRNOT00000011880.6	Cyp2d4	ENSRNOG0000032261	cytochrome P450, family 2, subfamily d, polypeptide 4 Source RGD Symbol Acc 620640
C08	UPFR1025167	ENSRNOT00000016883.6	Cyp2e1	ENSRNOG0000012458	cytochrome P450, family 2, subfamily e, polypeptide 1 Source RGD Symbol Acc 2475
C09	UPFR1118437	ENSRNOT00000001285.5	Cyp3a18	ENSRNOG0000009699	cytochrome P450, family 3, subfamily a, polypeptide 18 Source RGD Symbol Acc 628709
C10	UPFR1097359	ENSRNOT00000079106.1	Dnajb1	ENSRNOG0000021824	DnaJ heat shock protein family (Hsp40) member B1 Source RGD Symbol Acc 1304725
		ENSRNOT000000		ENSRNOG00	DnaJ heat shock protein family (Hsp40) member B9 Source RGD Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1035857	005363.5	Dnajb9	000004006	3070
C12	UPFR1023073	ENSRNOT00000 024246.7	Ercc2	ENSRNOG00 000017753	ERCC excision repair 2, TFIIH core complex helicase subunit Source RGD Symbol Acc 1309109
D01	UPFR1087878	ENSRNOT00000 022233.5	F2	ENSRNOG00 000016325	coagulation factor II Source RGD Symbol Acc 61996
D02	UPFR1108356	ENSRNOT00000 003998.2	Faslg	ENSRNOG00 000002978	Fas ligand Source RGD Symbol Acc 3880
D03	UPFR1036900	ENSRNOT00000 073321.2	Fasn	ENSRNOG00 000045636	fatty acid synthase Source RGD Symbol Acc 620665
D04	UPFR1061237	ENSRNOT00000 023014.3	Fhl2	ENSRNOG00 000016866	four and a half LIM domains 2 Source RGD Symbol Acc 61963
D05	UPFR1071868	ENSRNOT00000 018343.4	Gclm	ENSRNOG00 000013409	glutamate cysteine ligase, modifier subunit Source RGD Symbol Acc 619871
D06	UPFR1087543	ENSRNOT00000 005347.5	Grb2	ENSRNOG00 000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
D07	UPFR1015276	ENSRNOT00000 025559.5	Herpud1	ENSRNOG00 000018796	homocysteine inducible ER protein with ubiquitin like domain 1 Source RGD Symbol Acc 620818
D08	UPFR1040868	ENSRNOT00000 019192.6	Hmxo1	ENSRNOG00 000014117	heme oxygenase 1 Source RGD Symbol Acc 2806
D09	UPFR1106487	ENSRNOT00000 028644.6	Hpn	ENSRNOG00 000021097	hepsin Source RGD Symbol Acc 61982
D10	UPFR1084636	ENSRNOT00000 024710.5	Hpx	ENSRNOG00 000018257	hemopexin Source RGD Symbol Acc 62040
D11	UPFR1025762	ENSRNOT00000 050108.3	Hsf1	ENSRNOG00 000021732	heat shock transcription factor 1 Source RGD Symbol Acc 620913
D12	UPFR1020204	ENSRNOT00000 079731.1	Hsp90b1	ENSRNOG00 000026963	heat shock protein 90 beta family member 1 Source RGD Symbol Acc 1310482
E01	UPFR1057108	ENSRNOT00000 081924.1	Hspa1a	ENSRNOG00 000050647	heat shock protein family A (Hsp70) member 1B Source RGD Symbol Acc 2840
E02	UPFR1035851	ENSRNOT00000 019361.2	Edn1	ENSRNOG00 000014361	endothelin 1 Source RGD Symbol Acc 2532
E03	UPFR1042317	ENSRNOT00000 023628.3	Hspa4	ENSRNOG00 000016596	heat shock protein family A member 4 Source RGD Symbol Acc 628878
E04	UPFR1074347	ENSRNOT00000 025067.6	Hspa5	ENSRNOG00 000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
E05	UPFR1030516	ENSRNOT00000 031555.5	Hspb1	ENSRNOG00 000023546	heat shock protein family B (small) member 1 Source RGD Symbol Acc 61306
E06	UPFR1095647	ENSRNOT00000 066589.2	Hspd1	ENSRNOG00 000014525	heat shock protein family D member 1 Source RGD Symbol Acc 621314
E07	UPFR1037768	ENSRNOT00000 010106.4	Inhbe	ENSRNOG00 000007601	inhibin subunit beta E Source RGD Symbol Acc 621196
E08	UPFR1016556	ENSRNOT00000 016543.3	Lpl	ENSRNOG00 000012181	lipoprotein lipase Source RGD Symbol Acc 3017
E09	UPFR1112409	ENSRNOT00000 081903.1	Lss	ENSRNOG00 000054549	lanosterol synthase Source RGD Symbol Acc 620955
E10	UPFR1088385	ENSRNOT00000 007747.7	Lyz2	ENSRNOG00 000005825	lysozyme 2 Source RGD Symbol Acc 3026
E11	UPFR1017922	ENSRNOT00000 028544.5	Mag	ENSRNOG00 000021023	myelin-associated glycoprotein Source RGD Symbol Acc 3035
E12	UPFR1073822	ENSRNOT00000 066767.2	Mdm2	ENSRNOG00 000006304	MDM2 proto-oncogene Source RGD Symbol Acc 1305332
F01	UPFR1057838	ENSRNOT00000 031571.6	Metap2	ENSRNOG00 000021881	methionyl aminopeptidase 2 Source RGD Symbol Acc 70995
F02	UPFR1066912	ENSRNOT00000 038176.5	Mki67	ENSRNOG00 000028137	marker of proliferation Ki-67 Source RGD Symbol Acc 1305476
F03	UPFR1091459	ENSRNOT00000 018849.8	Ncoa7	ENSRNOG00 000014004	nuclear receptor coactivator 7 Source RGD Symbol Acc 1566426
F04	UPFR1111217	ENSRNOT00000 017174.5	Nqo1	ENSRNOG00 000012772	NAD(P)H quinone dehydrogenase 1 Source RGD Symbol Acc 2503
F05	UPFR1092910	ENSRNOT00000 000812.5	Nr5a2	ENSRNOG00 000000653	nuclear receptor subfamily 5, group A, member 2 Source RGD Symbol Acc 68353
F06	UPFR1027869	ENSRNOT00000 002405.5	Slc51a	ENSRNOG00 000001765	solute carrier family 51, alpha subunit Source RGD Symbol Acc 1311100
F07	UPFR1118434	ENSRNOT00000 011840.6	Parp2	ENSRNOG00 000008892	poly (ADP-ribose) polymerase 2 Source RGD Symbol Acc 1310568
F08	UPFR1018344	ENSRNOT00000 037576.3	Pdyn	ENSRNOG00 000026036	prodynorphin Source RGD Symbol Acc 62054
F09	UPFR1039308	ENSRNOT00000 030082.2	Ppara	ENSRNOG00 000021463	peroxisome proliferator activated receptor alpha Source RGD Symbol Acc 3369
F10	UPFR1103254	ENSRNOT00000 064305.3	PVR	ENSRNOG00 000019202	poliovirus receptor Source RGD Symbol Acc 3813

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1036915	ENSRNOT00000056432.2	Rad51	ENSRNOG0000037302	RAD51 recombinase Source RGD Symbol Acc 1563603
F12	UPFR1114083	ENSRNOT00000034924.5	Rdx	ENSRNOG0000012237	radixin Source RGD Symbol Acc 1359472
G01	UPFR1069413	ENSRNOT00000018447.5	Scd	ENSRNOG0000013552	stearoyl-CoA desaturase Source RGD Symbol Acc 621176
G02	UPFR1038357	ENSRNOT00000082680.1	LOC299282	ENSRNOG0000010478	Serine protease inhibitor Source RGD Symbol Acc 3745
G03	UPFR1095684	ENSRNOT00000020206.5	Slc25a25	ENSRNOG0000014338	solute carrier family 25 member 25 Source RGD Symbol Acc 628666
G04	UPFR1014889	ENSRNOT00000085447.1	LOC100909595	ENSRNOG0000008376	solute carrier family 2 member 3 Source RGD Symbol Acc 3706
G05	UPFR1111597	ENSRNOT00000014317.5	Slc7a11	ENSRNOG0000010210	solute carrier family 7 member 11 Source RGD Symbol Acc 1309275
G06	UPFR1104408	ENSRNOT00000004753.5	Srebf1	ENSRNOG0000003463	sterol regulatory element binding transcription factor 1 Source RGD Symbol Acc 69423
G07	UPFR1042915	ENSRNOT00000081737.1	Tagln	ENSRNOG0000017628	transgelin Source RGD Symbol Acc 3723
G08	UPFR1067796	ENSRNOT00000009840.5	Trib3	ENSRNOG0000007319	tribbles pseudokinase 3 Source RGD Symbol Acc 708432
G09	UPFR1054598	ENSRNOT00000001016.6	Trim10	ENSRNOG0000000782	tripartite motif-containing 10 Source RGD Symbol Acc 1359438
G10	UPFR1107823	ENSRNOT00000034676.4	Txn14b	ENSRNOG0000021379	thioredoxin-like 4B Source RGD Symbol Acc 1305127
G11	UPFR1046297	ENSRNOT00000083848.1	Uhrf1	ENSRNOG0000048411	ubiquitin-like with PHD and ring finger domains 1 Source RGD Symbol Acc 1595855
G12	UPFR1040874	ENSRNOT00000005172.7	Wipi1	ENSRNOG0000003827	WD repeat domain, phosphoinositide interacting 1 Source RGD Symbol Acc 1307754
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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