

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

## Rat Neurotoxicity

Cat. no. 249955 UPRN-096ZR

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
<b>A</b>	LOC1009097 50	Angptl4	Arg1	Arg2	Arnb1	Atf4	Bag4	Bdnf	Bik	Birc2	Camk2a	Camk2d
<b>B</b>	Casp7	Ccnd1	Cd8b	Cdkn1a	Cdo1	Cidea	Cideb	Cln5	Clnkb	Col12a1	Dapk1	Dd#3
<b>C</b>	Drd2	Drp2	Dynll1	Egln3	Eif2ak3	Ereg	Fas	Faslg	Gal	Galc	Gch1	Gpr37
<b>D</b>	Grin1	Gsn	Gsr	Gucy1a1	Heph	Hsp90aa1	Hspa5	Htr1a	Htr3a	Il10	Kit	Cradd
<b>E</b>	Lefty2	Lta	Mmp9	Nfkb1	Nal3	LOC1003610 87	Nosip	Nostrin	Notch4	Nup50	Pappa1	Pdia4
<b>F</b>	Plp1	Pou1f1	Prim2	Pygb	Rasd1	Sema3b	Sfn5	Slc16a3	Sod2	Tacr1	AABR0701832 3.1	Tnfrsf11b
<b>G</b>	Tnfrsf25	Tp53	Tph1	Traf2	Traf4	Trpm1	Trpm4	Txnip	Tyrp1	Usp7	Xiap	Ywhae
<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	UPFR1117746	ENSRNOT00000042495.5	LOC100909750	ENSRNOG0000047356	tyrosine-protein kinase ABL1-like Source RGD Symbol Acc 6502032
A02	UPFR1032714	ENSRNOT00000010031.6	Angptl4	ENSRNOG0000007545	angiotensin-like 4 Source RGD Symbol Acc 735058
A03	UPFR1104997	ENSRNOT00000017911.5	Arg1	ENSRNOG0000013304	arginase 1 Source RGD Symbol Acc 2150
A04	UPFR1100540	ENSRNOT00000083433.1	Arg2	ENSRNOG0000053811	arginase 2 Source RGD Symbol Acc 2151
A05	UPFR1122474	ENSRNOT00000043554.4	Arrb1	ENSRNOG0000030404	arrestin, beta 1 Source RGD Symbol Acc 2156
A06	UPFR1067882	ENSRNOT00000065304.4	Atf4	ENSRNOG0000017801	activating transcription factor 4 Source RGD Symbol Acc 621863
A07	UPFR1030593	ENSRNOT00000066901.3	Bag4	ENSRNOG0000042560	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A08	UPFR1014257	ENSRNOT00000078543.1	Bdnf	ENSRNOG0000047466	brain-derived neurotrophic factor Source RGD Symbol Acc 2202
A09	UPFR1110229	ENSRNOT00000013977.2	Bik	ENSRNOG0000010359	BCL2-interacting killer Source RGD Symbol Acc 621547
A10	UPFR1050093	ENSRNOT00000014560.6	Birc2	ENSRNOG0000010602	baculoviral IAP repeat-containing 2 Source RGD Symbol Acc 620690
A11	UPFR1027233	ENSRNOT00000041533.5	Camk2a	ENSRNOG0000018712	calcium/calmodulin-dependent protein kinase II alpha Source RGD Symbol Acc 2261
A12	UPFR1120659	ENSRNOT00000015564.7	Camk2d	ENSRNOG0000011589	calcium/calmodulin-dependent protein kinase II delta Source RGD Symbol Acc 2263
B01	UPFR1051332	ENSRNOT00000080511.1	Casp7	ENSRNOG0000056216	caspase 7 Source RGD Symbol Acc 620944
B02	UPFR1042457	ENSRNOT00000088588.1	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B03	UPFR1073792	ENSRNOT00000009392.7	Cd8b	ENSRNOG0000007129	CD8b molecule Source RGD Symbol Acc 2317
B04	UPFR1028644	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B05	UPFR1063689	ENSRNOT00000000172.5	Cdo1	ENSRNOG0000000158	cysteine dioxygenase type 1 Source RGD Symbol Acc 69262
B06	UPFR1081048	ENSRNOT00000024968.7	Cidea	ENSRNOG0000018505	cell death-inducing DFFA-like effector a Source RGD Symbol Acc 1305106
B07	UPFR1033473	ENSRNOT00000027612.6	Cideb	ENSRNOG0000020377	cell death-inducing DFFA-like effector b Source RGD Symbol Acc 1310000
B08	UPFR1021440	ENSRNOT00000003895.6	Clcn5	ENSRNOG0000002862	chloride voltage-gated channel 5 Source RGD Symbol Acc 2362
B09	UPFR1070535	ENSRNOT00000013550.5	Clcnkb	ENSRNOG0000009897	chloride voltage-gated channel Kb Source RGD Symbol Acc 628639
B10	UPFR1047171	ENSRNOT00000077071.1	Col12a1	ENSRNOG0000058470	collagen type XII alpha 1 chain Source RGD Symbol Acc 2374
B11	UPFR1056311	ENSRNOT00000066950.2	Dapk1	ENSRNOG0000018198	death associated protein kinase 1 Source RGD Symbol Acc 1311629
B12	UPFR1119718	ENSRNOT00000008941.5	Ddit3	ENSRNOG0000006789	DNA-damage inducible transcript 3 Source RGD Symbol Acc 62391
C01	UPFR1040837	ENSRNOT00000045944.5	Drd2	ENSRNOG0000008428	dopamine receptor D2 Source RGD Symbol Acc 2520
C02	UPFR1087988	ENSRNOT00000039864.3	Drp2	ENSRNOG0000026704	dystrophin related protein 2 Source RGD Symbol Acc 621750
C03	UPFR1093728	ENSRNOT00000014910.5	Dynll1	ENSRNOG0000011222	dynein light chain LC8-type 1 Source RGD Symbol Acc 619866
C04	UPFR1091188	ENSRNOT00000007219.2	Egln3	ENSRNOG0000005053	egl-9 family hypoxia-inducible factor 3 Source RGD Symbol Acc 71019
C05	UPFR1090219	ENSRNOT00000008451.5	Eif2ak3	ENSRNOG0000006069	eukaryotic translation initiation factor 2 alpha kinase 3 Source RGD Symbol Acc 70884
C06	UPFR1109356	ENSRNOT00000003716.3	Ereg	ENSRNOG0000002771	epiregulin Source RGD Symbol Acc 620299
C07	UPFR1075141	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
C08	UPFR1108356	ENSRNOT00000003998.2	Faslg	ENSRNOG0000002978	Fas ligand Source RGD Symbol Acc 3880
C09	UPFR1084036	ENSRNOT00000020425.5	Gal	ENSRNOG0000015156	galanin and GMAP prepropeptide Source RGD Symbol Acc 61954
C10	UPFR1116228	ENSRNOT00000005015.6	Galc	ENSRNOG0000003759	galactosylceramidase Source RGD Symbol Acc 1359384
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1090945	014821.7	Gch1	000011039	GTP cyclohydrolase 1 Source RGD Symbol Acc 61992
C12	UPFR1100665	ENSRNOT0000003593.6	Gpr37	ENSRNOG0000002524	G protein-coupled receptor 37 Source RGD Symbol Acc 619848
D01	UPFR1041053	ENSRNOT00000049297.3	Grin1	ENSRNOG00000011726	glutamate ionotropic receptor NMDA type subunit 1 Source RGD Symbol Acc 2736
D02	UPFR1042081	ENSRNOT00000078939.1	Gsn	ENSRNOG0000018991	gelsolin Source RGD Symbol Acc 1303089
D03	UPFR1080300	ENSRNOT00000090036.1	Gsr	ENSRNOG0000014915	glutathione-disulfide reductase Source RGD Symbol Acc 621747
D04	UPFR1071753	ENSRNOT00000017190.4	Gucy1a1	ENSRNOG0000012302	guanylate cyclase 1 soluble subunit alpha 1 Source RGD Symbol Acc 68436
D05	UPFR1055832	ENSRNOT00000017312.5	Heph	ENSRNOG0000012294	hephaestin Source RGD Symbol Acc 71060
D06	UPFR1014170	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
D07	UPFR1074347	ENSRNOT00000025067.6	Hspa5	ENSRNOG0000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
D08	UPFR1088882	ENSRNOT00000013618.2	Htr1a	ENSRNOG0000010254	5-hydroxytryptamine receptor 1A Source RGD Symbol Acc 2845
D09	UPFR1055375	ENSRNOT00000008965.4	Htr3a	ENSRNOG0000006595	5-hydroxytryptamine receptor 3A Source RGD Symbol Acc 61818
D10	UPFR1113235	ENSRNOT00000006246.5	Il10	ENSRNOG0000004647	interleukin 10 Source RGD Symbol Acc 2886
D11	UPFR1068157	ENSRNOT00000003050.3	Kit	ENSRNOG0000002227	KIT proto-oncogene receptor tyrosine kinase Source RGD Symbol Acc 620568
D12	UPFR1111527	ENSRNOT00000063946.1	Cradd	ENSRNOG0000008507	CASP2 and RIPK1 domain containing adaptor with death domain Source RGD Symbol Acc 1311010
E01	UPFR1100926	ENSRNOT00000080574.1	Lefty2	ENSRNOG0000060325	Left-right determination factor 2 Source RGD Symbol Acc 1359679
E02	UPFR1116910	ENSRNOT00000088936.1	Lta	ENSRNOG0000000838	lymphotoxin alpha Source RGD Symbol Acc 3020
E03	UPFR1032957	ENSRNOT00000023965.3	Mmp9	ENSRNOG0000017539	matrix metalloproteinase 9 Source RGD Symbol Acc 621320
E04	UPFR1116688	ENSRNOT00000036838.4	Nfkb1	ENSRNOG0000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
E05	UPFR1059501	ENSRNOT00000020908.5	Nol3	ENSRNOG0000015588	nucleolar protein 3 Source RGD Symbol Acc 708558
E06	UPFR1023550	ENSRNOT00000032218.5	LOC100361087	ENSRNOG0000042929	hypothetical LOC100361087 Source RGD Symbol Acc 2320873
E07	UPFR1085482	ENSRNOT00000027882.7	Nosip	ENSRNOG0000020543	nitric oxide synthase interacting protein Source RGD Symbol Acc 1309992
E08	UPFR1121089	ENSRNOT00000067161.3	Nostrin	ENSRNOG0000006611	nitric oxide synthase trafficking Source RGD Symbol Acc 727920
E09	UPFR1111007	ENSRNOT00000000513.4	Notch4	ENSRNOG0000000442	notch 4 Source RGD Symbol Acc 1303282
E10	UPFR1079590	ENSRNOT00000080933.1	Nup50	ENSRNOG0000013423	nucleoporin 50 Source RGD Symbol Acc 3191
E11	UPFR1018164	ENSRNOT00000076111.2	Pappa1	ENSRNOG0000033527	pappalysin 1 Source RGD Symbol Acc 1307742
E12	UPFR1037709	ENSRNOT00000008728.5	Pdia4	ENSRNOG0000006228	protein disulfide isomerase family A, member 4 Source RGD Symbol Acc 619835
F01	UPFR1105857	ENSRNOT00000003283.6	Plp1	ENSRNOG0000002419	proteolipid protein 1 Source RGD Symbol Acc 3354
F02	UPFR1083531	ENSRNOT00000000905.6	Pou1f1	ENSRNOG0000000715	POU class 1 homeobox 1 Source RGD Symbol Acc 3367
F03	UPFR1095755	ENSRNOT00000016828.8	Prim2	ENSRNOG0000012486	DNA primase subunit 2 Source RGD Symbol Acc 631433
F04	UPFR1057435	ENSRNOT00000010157.6	Pygb	ENSRNOG0000007583	glycogen phosphorylase B Source RGD Symbol Acc 3460
F05	UPFR1022904	ENSRNOT00000004475.6	Rasd1	ENSRNOG0000003348	ras related dexamethasone induced 1 Source RGD Symbol Acc 619727
F06	UPFR1018228	ENSRNOT00000066296.1	Sema3b	ENSRNOG0000016512	semaphorin 3B Source RGD Symbol Acc 1310079
F07	UPFR1072328	ENSRNOT00000057537.4	Sfxn5	ENSRNOG0000037871	sideroflexin 5 Source RGD Symbol Acc 628706
F08	UPFR1085116	ENSRNOT00000054939.3	Slc16a3	ENSRNOG0000036677	solute carrier family 16 member 3 Source RGD Symbol Acc 620603
F09	UPFR1090502	ENSRNOT00000025794.4	Sod2	ENSRNOG0000019048	superoxide dismutase 2 Source RGD Symbol Acc 3732
F10	UPFR1122055	ENSRNOT00000007984.5	Tacr1	ENSRNOG0000005853	tachykinin receptor 1 Source RGD Symbol Acc 3811

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1016844	ENSRNOT00000066128.4	AABR07018323.1	ENSRNOG0000038483	
F12	UPFR1015258	ENSRNOT00000011344.5	Tnfrsf11b	ENSRNOG0000008336	TNF receptor superfamily member 11B Source RGD Symbol Acc 619802
G01	UPFR1024276	ENSRNOT00000055466.2	Tnfrsf25	ENSRNOG0000021814	TNF receptor superfamily member 25 Source RGD Symbol Acc 1598206
G02	UPFR1095007	ENSRNOT00000085115.1	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
G03	UPFR1071293	ENSRNOT00000056109.3	Tph1	ENSRNOG0000011672	tryptophan hydroxylase 1 Source RGD Symbol Acc 3895
G04	UPFR1056890	ENSRNOT00000008253.6	Traf2	ENSRNOG0000006238	Tnf receptor-associated factor 2 Source RGD Symbol Acc 1310457
G05	UPFR1099567	ENSRNOT00000018468.5	Traf4	ENSRNOG0000013169	Tnf receptor associated factor 4 Source RGD Symbol Acc 1306708
G06	UPFR1080330	ENSRNOT00000021262.6	Trpm1	ENSRNOG0000015829	transient receptor potential cation channel, subfamily M, member 1 Source RGD Symbol Acc 1597140
G07	UPFR1043492	ENSRNOT00000041513.4	Trpm4	ENSRNOG0000020714	transient receptor potential cation channel, subfamily M, member 4 Source RGD Symbol Acc 620244
G08	UPFR1099909	ENSRNOT00000028793.6	Txnip	ENSRNOG0000021201	thioredoxin interacting protein Source RGD Symbol Acc 620886
G09	UPFR1095269	ENSRNOT00000046503.3	Tyrp1	ENSRNOG0000029318	tyrosinase-related protein 1 Source RGD Symbol Acc 1593266
G10	UPFR1119122	ENSRNOT00000046232.5	Usp7	ENSRNOG0000025496	ubiquitin specific peptidase 7 Source RGD Symbol Acc 1306915
G11	UPFR1049285	ENSRNOT00000009336.3	Xiap	ENSRNOG0000006967	X-linked inhibitor of apoptosis Source RGD Symbol Acc 620692
G12	UPFR1057711	ENSRNOT00000007100.5	Ywhae	ENSRNOG0000005290	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon Source RGD Symbol Acc 62000
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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