

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

## Mouse Neurotoxicity

Cat. no. 249955 UPMM-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
A	Abl1	Angptl4	Arg1	Arg2	Arhb1	Atf4	Bag4	Bdnf	Bik	Birc2	Camk2a	Camk2d
B	Casp7	Ccnd1	Cd8b1	Cdkn1a	Cdo1	Cidea	Cideb	Cln5	Clenkb	Col12a1	Cradd	Dapk1
C	Ddit3	Drd2	Drp2	Dynll1	Egln3	Eif2ak3	Ereg	Fas	Fosl	Gal	Galc	Gch1
D	Gpr37	Grin1	Gsn	Gsr	Gucy1a1	Heph	Hsp90aa1	Hspa5	Htr1a	Htr3a	Il10	Kit
E	Ldha	Lefty2	Lta	Mmp9	Nrkb1	Nol3	Nos1ap	Nosip	Nostrin	Notch4	Nup50	Pappa
F	Pdia4	Plp1	Pou1f1	Prim2	Rasd1	Sema3b	Sfn5	Slc16a3	Sod2	Tacr1	Tnfrsf10b	Tnfrsf11b
G	Tnfrsf25	Tph1	Traf2	Traf4	Trp53	Trpm1	Trpm4	Txnip	Tyrb1	Usp7	Xiap	Ywhae
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	UPFM089352 2	ENSMUST00000 028190.12	Abl1	ENSMUSG00 000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A02	UPFM095383 3	ENSMUST00000 174872.1	Angptl4	ENSMUSG00 000002289	angiotensin-like 4 Source MGI Symbol Acc MGI 1888999
A03	UPFM072786 1	ENSMUST00000 020161.9	Arg1	ENSMUSG00 000019987	arginase, liver Source MGI Symbol Acc MGI 88070
A04	UPFM070049 1	ENSMUST00000 021550.6	Arg2	ENSMUSG00 000021125	arginase type II Source MGI Symbol Acc MGI 1330806
A05	UPFM067892 3	ENSMUST00000 159642.1	Arrb1	ENSMUSG00 000018909	arrestin, beta 1 Source MGI Symbol Acc MGI 99473
A06	UPFM075251 7	ENSMUST00000 229828.1	Atf4	ENSMUSG00 000042406	activating transcription factor 4 Source MGI Symbol Acc MGI 88096
A07	UPFM072913 9	ENSMUST00000 038498.9	Bag4	ENSMUSG00 000037316	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A08	UPFM085815 5	ENSMUST00000 111049.8	Bdnf	ENSMUSG00 000048482	brain derived neurotrophic factor Source MGI Symbol Acc MGI 88145
A09	UPFM061966 4	ENSMUST00000 229165.1	Bik	ENSMUSG00 000016758	BCL2-interacting killer Source MGI Symbol Acc MGI 1206591
A10	UPFM072353 2	ENSMUST00000 074246.6	Birc2	ENSMUSG00 000057367	baculoviral IAP repeat-containing 2 Source MGI Symbol Acc MGI 1197009
A11	UPFM099124 3	ENSMUST00000 115297.7	Camk2a	ENSMUSG00 000024617	calcium/calmodulin-dependent protein kinase II alpha Source MGI Symbol Acc MGI 88256
A12	UPFM062884 2	ENSMUST00000 143383.7	Camk2d	ENSMUSG00 000053819	calcium/calmodulin-dependent protein kinase II, delta Source MGI Symbol Acc MGI 1341265
B01	UPFM063048 8	ENSMUST00000 237055.1	Casp7	ENSMUSG00 000025076	caspase 7 Source MGI Symbol Acc MGI 109383
B02	UPFM093346 3	ENSMUST00000 208193.1	Ccnd1	ENSMUSG00 000070348	cyclin D1 Source MGI Symbol Acc MGI 88313
B03	UPFM090571 3	ENSMUST00000 065248.8	Cd8b1	ENSMUSG00 000053044	CD8 antigen, beta chain 1 Source MGI Symbol Acc MGI 88347
B04	UPFM086779 1	ENSMUST00000 122348.2	Cdkn1a	ENSMUSG00 000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B05	UPFM089936 1	ENSMUST00000 035804.8	Cdo1	ENSMUSG00 000033022	cysteine dioxygenase 1, cytosolic Source MGI Symbol Acc MGI 105925
B06	UPFM069650 1	ENSMUST00000 025404.9	Cidea	ENSMUSG00 000024526	cell death-inducing DNA fragmentation factor, alpha subunit-like effector A Source MGI Symbol Acc MGI 1270845
B07	UPFM075744 5	ENSMUST00000 001497.8	Cideb	ENSMUSG00 000022219	cell death-inducing DNA fragmentation factor, alpha subunit-like effector B Source MGI Symbol Acc MGI 1270844
B08	UPFM084062 7	ENSMUST00000 154382.1	Clcn5	ENSMUSG00 000004317	chloride channel, voltage-sensitive 5 Source MGI Symbol Acc MGI 99486
B09	UPFM096440 6	ENSMUST00000 105788.1	Clcnkb	ENSMUSG00 000006216	chloride channel, voltage-sensitive Kb Source MGI Symbol Acc MGI 1930643
B10	UPFM067467 7	ENSMUST00000 071750.12	Col12a1	ENSMUSG00 000032332	collagen, type XII, alpha 1 Source MGI Symbol Acc MGI 88448
B11	UPFM073143 9	ENSMUST00000 220279.1	Cradd	ENSMUSG00 000045867	CASP2 and RIPK1 domain containing adaptor with death domain Source MGI Symbol Acc MGI 1336168
B12	UPFM088410 1	ENSMUST00000 077453.12	Dapk1	ENSMUSG00 000021559	death associated protein kinase 1 Source MGI Symbol Acc MGI 1916885
C01	UPFM076656 9	ENSMUST00000 026475.14	Ddit3	ENSMUSG00 000025408	DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247
C02	UPFM085072 5	ENSMUST00000 075764.7	Drd2	ENSMUSG00 000032259	dopamine receptor D2 Source MGI Symbol Acc MGI 94924
C03	UPFM083742 5	ENSMUST00000 153424.7	Drp2	ENSMUSG00 000000223	dystrophin related protein 2 Source MGI Symbol Acc MGI 107432
C04	UPFM086473 9	ENSMUST00000 202980.1	Dynll1	ENSMUSG00 000009013	dynein light chain LC8-type 1 Source MGI Symbol Acc MGI 1861457
C05	UPFM098184 5	ENSMUST00000 039516.3	Egln3	ENSMUSG00 000035105	egl-9 family hypoxia-inducible factor 3 Source MGI Symbol Acc MGI 1932288
C06	UPFM098943 8	ENSMUST00000 159401.1	Eif2ak3	ENSMUSG00 000031668	eukaryotic translation initiation factor 2 alpha kinase 3 Source MGI Symbol Acc MGI 1341830
C07	UPFM069297 7	ENSMUST00000 031324.5	Ereg	ENSMUSG00 000029377	epiregulin Source MGI Symbol Acc MGI 107508
C08	UPFM099578 7	ENSMUST00000 235709.1	Fas	ENSMUSG00 000024778	Fas (TNF receptor superfamily member 6) Source MGI Symbol Acc MGI 95484
C09	UPFM074944 2	ENSMUST00000 193648.1	Fasl	ENSMUSG00 000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
C10	UPFM087979 6	ENSMUST00000 237521.1	Gal	ENSMUSG00 000024907	galanin Source MGI Symbol Acc MGI 95637
	UPFM101240	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	9	222042.1	Galc	000021003	galactosylceramidase Source MGI Symbol Acc MGI 95636
C12	UPFM098344 7	ENSMUST00000 089959.6	Gch1	ENSMUSG00 000037580	GTP cyclohydrolase 1 Source MGI Symbol Acc MGI 95675
D01	UPFM070038 8	ENSMUST00000 200812.1	Gpr37	ENSMUSG00 000039904	G protein-coupled receptor 37 Source MGI Symbol Acc MGI 1313297
D02	UPFM066058 1	ENSMUST00000 114312.1	Grin1	ENSMUSG00 000026959	glutamate receptor, ionotropic, NMDA1 (zeta 1) Source MGI Symbol Acc MGI 95819
D03	UPFM097833 2	ENSMUST00000 142324.7	Gsn	ENSMUSG00 000026879	gelsolin Source MGI Symbol Acc MGI 95851
D04	UPFM072352 2	ENSMUST00000 033992.8	Gsr	ENSMUSG00 000031584	glutathione reductase Source MGI Symbol Acc MGI 95804
D05	UPFM066016 7	ENSMUST00000 191942.1	Gucy1a1	ENSMUSG00 000033910	guanylate cyclase 1, soluble, alpha 1 Source MGI Symbol Acc MGI 1926562
D06	UPFM079605 2	ENSMUST00000 079322.11	Heph	ENSMUSG00 000031209	hephaestin Source MGI Symbol Acc MGI 1332240
D07	UPFM099789 5	ENSMUST00000 155242.7	Hsp90aa1	ENSMUSG00 000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
D08	UPFM100460 3	ENSMUST00000 100171.2	Hspa5	ENSMUSG00 000026864	heat shock protein 5 Source MGI Symbol Acc MGI 95835
D09	UPFM071045 4	ENSMUST00000 022235.5	Htr1a	ENSMUSG00 000021721	5-hydroxytryptamine (serotonin) receptor 1A Source MGI Symbol Acc MGI 96273
D10	UPFM073937 6	ENSMUST00000 217289.1	Htr3a	ENSMUSG00 000032269	5-hydroxytryptamine (serotonin) receptor 3A Source MGI Symbol Acc MGI 96282
D11	UPFM117295 1	ENSMUST00000 016673.5	Il10	ENSMUSG00 000016529	interleukin 10 Source MGI Symbol Acc MGI 96537
D12	UPFM098121 2	ENSMUST00000 143221.1	Kit	ENSMUSG00 000005672	KIT proto-oncogene receptor tyrosine kinase Source MGI Symbol Acc MGI 96677
E01	UPFM085535 7	ENSMUST00000 125862.7	Ldha	ENSMUSG00 000063229	lactate dehydrogenase A Source MGI Symbol Acc MGI 96759
E02	UPFM078022 9	ENSMUST00000 085797.5	Lefty2	ENSMUSG00 000066652	left-right determination factor 2 Source MGI Symbol Acc MGI 2443573
E03	UPFM065707 9	ENSMUST00000 025266.5	Lta	ENSMUSG00 000024402	lymphotoxin A Source MGI Symbol Acc MGI 104797
E04	UPFM079930 8	ENSMUST00000 017881.2	Mmp9	ENSMUSG00 000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
E05	UPFM098758 7	ENSMUST00000 029812.13	Nfkb1	ENSMUSG00 000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
E06	UPFM082637 4	ENSMUST00000 014920.7	Nol3	ENSMUSG00 000014776	nucleolar protein 3 (apoptosis repressor with CARD domain) Source MGI Symbol Acc MGI 1925938
E07	UPFM075740 6	ENSMUST00000 160816.7	Nos1ap	ENSMUSG00 000038473	nitric oxide synthase 1 (neuronal) adaptor protein Source MGI Symbol Acc MGI 1917979
E08	UPFM075516 0	ENSMUST00000 107829.8	Nosip	ENSMUSG00 000003421	nitric oxide synthase interacting protein Source MGI Symbol Acc MGI 1913644
E09	UPFM079465 5	ENSMUST00000 141276.1	Nostrin	ENSMUSG00 000034738	nitric oxide synthase trafficker Source MGI Symbol Acc MGI 3606242
E10	UPFM072282 5	ENSMUST00000 151654.7	Notch4	ENSMUSG00 000015468	notch 4 Source MGI Symbol Acc MGI 107471
E11	UPFM071256 7	ENSMUST00000 165443.3	Nup50	ENSMUSG00 000016619	nucleoporin 50 Source MGI Symbol Acc MGI 1351502
E12	UPFM096559 0	ENSMUST00000 084501.3	Pappa	ENSMUSG00 000028370	pregnancy-associated plasma protein A Source MGI Symbol Acc MGI 97479
F01	UPFM066707 5	ENSMUST00000 077290.8	Pdia4	ENSMUSG00 000025823	protein disulfide isomerase associated 4 Source MGI Symbol Acc MGI 104864
F02	UPFM067787 5	ENSMUST00000 125644.1	Plp1	ENSMUSG00 000031425	proteolipid protein (myelin) 1 Source MGI Symbol Acc MGI 97623
F03	UPFM088824 3	ENSMUST00000 176330.7	Pou1f1	ENSMUSG00 000004842	POU domain, class 1, transcription factor 1 Source MGI Symbol Acc MGI 97588
F04	UPFM093038 9	ENSMUST00000 027312.10	Prim2	ENSMUSG00 000026134	DNA primase, p58 subunit Source MGI Symbol Acc MGI 97758
F05	UPFM081107 9	ENSMUST00000 062405.7	Rasd1	ENSMUSG00 000049892	RAS, dexamethasone-induced 1 Source MGI Symbol Acc MGI 1270848
F06	UPFM096659 3	ENSMUST00000 194606.1	Sema3b	ENSMUSG00 000057969	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B Source MGI Symbol Acc MGI 107561
F07	UPFM071120 4	ENSMUST00000 113788.1	Sfn5	ENSMUSG00 000033720	sideroflexin 5 Source MGI Symbol Acc MGI 2137681
F08	UPFM068314 7	ENSMUST00000 140467.1	Slc16a3	ENSMUSG00 000025161	solute carrier family 16 (monocarboxylic acid transporters), member 3 Source MGI Symbol Acc MGI 1933438
F09	UPFM095033 7	ENSMUST00000 233897.1	Sod2	ENSMUSG00 000006818	superoxide dismutase 2, mitochondrial Source MGI Symbol Acc MGI 98352
F10	UPFM062175 6	ENSMUST00000 032122.10	Tacr1	ENSMUSG00 000030043	tachykinin receptor 1 Source MGI Symbol Acc MGI 98475

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM064695 8	ENSMUST00000 022663.6	Tnfrsf10b	ENSMUSG00 000022074	tumor necrosis factor receptor superfamily, member 10b Source MGI Symbol Acc MGI 1341090
F12	UPFM072017 7	ENSMUST00000 079772.3	Tnfrsf11b	ENSMUSG00 000063727	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin) Source MGI Symbol Acc MGI 109587
G01	UPFM088644 9	ENSMUST00000 025706.9	Tnfrsf25	ENSMUSG00 000024793	tumor necrosis factor receptor superfamily, member 25 Source MGI Symbol Acc MGI 1934667
G02	UPFM076531 9	ENSMUST00000 172386.7	Tph1	ENSMUSG00 000040046	tryptophan hydroxylase 1 Source MGI Symbol Acc MGI 98796
G03	UPFM092017 5	ENSMUST00000 028311.12	Traf2	ENSMUSG00 000026942	TNF receptor-associated factor 2 Source MGI Symbol Acc MGI 101835
G04	UPFM099292 1	ENSMUST00000 148218.1	Traf4	ENSMUSG00 000017386	TNF receptor associated factor 4 Source MGI Symbol Acc MGI 1202880
G05	UPFM066913 3	ENSMUST00000 171247.7	Trp53	ENSMUSG00 000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G06	UPFM090522 9	ENSMUST00000 205348.1	Trpm1	ENSMUSG00 000030523	transient receptor potential cation channel, subfamily M, member 1 Source MGI Symbol Acc MGI 1330305
G07	UPFM092717 2	ENSMUST00000 209506.1	Trpm4	ENSMUSG00 000038260	transient receptor potential cation channel, subfamily M, member 4 Source MGI Symbol Acc MGI 1915917
G08	UPFM067128 4	ENSMUST00000 074519.12	Txnip	ENSMUSG00 000038393	thioredoxin interacting protein Source MGI Symbol Acc MGI 1889549
G09	UPFM075662 6	ENSMUST00000 006151.12	Tyrp1	ENSMUSG00 000005994	tyrosinase-related protein 1 Source MGI Symbol Acc MGI 98881
G10	UPFM075325 3	ENSMUST00000 172505.1	Usp7	ENSMUSG00 000022710	ubiquitin specific peptidase 7 Source MGI Symbol Acc MGI 2182061
G11	UPFM083576 8	ENSMUST00000 145065.1	Xiap	ENSMUSG00 000025860	X-linked inhibitor of apoptosis Source MGI Symbol Acc MGI 107572
G12	UPFM071565 1	ENSMUST00000 153038.7	Ywhae	ENSMUSG00 000020849	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide Source MGI Symbol Acc MGI 894689
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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