

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

## Mouse Dopamine & Serotonin Pathway

Cat. no. 249955 UPMM-158ZA

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	Adcy1	Adcy2	Adcy3	Adcy5	Adrb1	Adrb2	Grk2	Grk3	Akt1	Akt2	Akt3	Alox12
B	App	Arrb1	Arrb2	Bdnf	Cacna1a	Casp3	Cdk5	Comt	Creb1	Cyp2d22	Dbh	Ddc
C	Drd1	Drd2	Drd3	Drd4	Drd5	Dusp1	Ephb1	Fos	Gdnf	Gfap	Grk4	Grk5
D	Grk6	Gsk3a	Gsk3b	Htr1a	Htr1b	Htr1d	Htr1f	Htr2a	Htr2b	Htr2c	Htr3a	Htr3b
E	Htr4	Htr5a	Htr6	Htr7	Itp1	Maoa	Maob	Mapk1	Nr4a1	Nr4a3	Pde10a	Pde4a
F	Pde4b	Pde4c	Pde4d	Pdyn	Pik3ca	Pik3cg	Pla2g5	Plcb1	Plcb2	Plcb3	Ppp1r1b	Prkaca
G	Ptgs2	Slc18a1	Slc18a2	Slc6a3	Slc6a4	Snca	Sncap	Syn2	Tda2	Th	Tph1	Tph2
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	UPFM0781353	ENSMUST0000020706.4	Adcy1	ENSMUSG0000020431	adenylate cyclase 1 Source MGI Symbol Acc MGI 99677
A02	UPFM0812343	ENSMUST0000022013.7	Adcy2	ENSMUSG0000021536	adenylate cyclase 2 Source MGI Symbol Acc MGI 99676
A03	UPFM0880338	ENSMUST00000127756.7	Adcy3	ENSMUSG0000020654	adenylate cyclase 3 Source MGI Symbol Acc MGI 99675
A04	UPFM0906503	ENSMUST00000114913.2	Adcy5	ENSMUSG0000022840	adenylate cyclase 5 Source MGI Symbol Acc MGI 99673
A05	UPFM0720171	ENSMUST0000038949.5	Adrb1	ENSMUSG0000035283	adrenergic receptor, beta 1 Source MGI Symbol Acc MGI 87937
A06	UPFM0866443	ENSMUST0000053640.4	Adrb2	ENSMUSG0000045730	adrenergic receptor, beta 2 Source MGI Symbol Acc MGI 87938
A07	UPFM0782235	ENSMUST00000168594.7	Grk2	ENSMUSG0000024858	G protein-coupled receptor kinase 2 Source MGI Symbol Acc MGI 87940
A08	UPFM0706902	ENSMUST00000065167.8	Grk3	ENSMUSG0000042249	G protein-coupled receptor kinase 3 Source MGI Symbol Acc MGI 87941
A09	UPFM0827860	ENSMUST00000139388.2	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A10	UPFM0744642	ENSMUST00000138459.7	Akt2	ENSMUSG0000004056	thymoma viral proto-oncogene 2 Source MGI Symbol Acc MGI 104874
A11	UPFM0852369	ENSMUST00000111160.8	Akt3	ENSMUSG0000019699	thymoma viral proto-oncogene 3 Source MGI Symbol Acc MGI 1345147
A12	UPFM1007863	ENSMUST00000108574.2	Alox12	ENSMUSG0000000320	arachidonate 12-lipoxygenase Source MGI Symbol Acc MGI 87998
B01	UPFM0815169	ENSMUST00000227723.1	App	ENSMUSG0000022892	amyloid beta (A4) precursor protein Source MGI Symbol Acc MGI 88059
B02	UPFM0678923	ENSMUST00000159642.1	Arrb1	ENSMUSG0000018909	arrestin, beta 1 Source MGI Symbol Acc MGI 99473
B03	UPFM0672806	ENSMUST00000084954.12	Arrb2	ENSMUSG0000060216	arrestin, beta 2 Source MGI Symbol Acc MGI 99474
B04	UPFM0858155	ENSMUST00000111049.8	Bdnf	ENSMUSG0000048482	brain derived neurotrophic factor Source MGI Symbol Acc MGI 88145
B05	UPFM0658253	ENSMUST00000144879.7	Cacna1a	ENSMUSG0000034656	calcium channel, voltage-dependent, P/Q type, alpha 1A subunit Source MGI Symbol Acc MGI 109482
B06	UPFM0728951	ENSMUST00000210534.1	Casp3	ENSMUSG0000031628	caspase 3 Source MGI Symbol Acc MGI 107739
B07	UPFM0895568	ENSMUST00000030814.10	Cdk5	ENSMUSG0000028969	cyclin-dependent kinase 5 Source MGI Symbol Acc MGI 101765
B08	UPFM0879297	ENSMUST00000165430.7	Comt	ENSMUSG0000000326	catechol-O-methyltransferase Source MGI Symbol Acc MGI 88470
B09	UPFM0852938	ENSMUST00000087366.10	Creb1	ENSMUSG0000025958	cAMP responsive element binding protein 1 Source MGI Symbol Acc MGI 88494
B10	UPFM0968607	ENSMUST00000230663.1	Cyp2d22	ENSMUSG0000061740	cytochrome P450, family 2, subfamily d, polypeptide 22 Source MGI Symbol Acc MGI 1929474
B11	UPFM0780654	ENSMUST00000000910.6	Dbh	ENSMUSG0000000889	dopamine beta hydroxylase Source MGI Symbol Acc MGI 94864
B12	UPFM0945518	ENSMUST00000136810.7	Ddc	ENSMUSG0000020182	dopa decarboxylase Source MGI Symbol Acc MGI 94876
C01	UPFM0827602	ENSMUST0000021932.5	Drd1	ENSMUSG0000021478	dopamine receptor D1 Source MGI Symbol Acc MGI 99578
C02	UPFM0850725	ENSMUST00000075764.7	Drd2	ENSMUSG0000032259	dopamine receptor D2 Source MGI Symbol Acc MGI 94924
C03	UPFM0960576	ENSMUST00000223390.4	Drd3	ENSMUSG0000022705	dopamine receptor D3 Source MGI Symbol Acc MGI 94925
C04	UPFM0927780	ENSMUST00000026569.5	Drd4	ENSMUSG0000025496	dopamine receptor D4 Source MGI Symbol Acc MGI 94926
C05	UPFM0929932	ENSMUST00000041646.3	Drd5	ENSMUSG0000039358	dopamine receptor D5 Source MGI Symbol Acc MGI 94927
C06	UPFM0864537	ENSMUST00000236661.1	Dusp1	ENSMUSG0000024190	dual specificity phosphatase 1 Source MGI Symbol Acc MGI 105120
C07	UPFM0658113	ENSMUST00000035129.13	Ephb1	ENSMUSG0000032537	Eph receptor B1 Source MGI Symbol Acc MGI 1096337
C08	UPFM0764563	ENSMUST00000136122.7	Fos	ENSMUSG0000021250	FBJ osteosarcoma oncogene Source MGI Symbol Acc MGI 95574
C09	UPFM0791269	ENSMUST0000022744.4	Gdnf	ENSMUSG0000022144	glial cell line derived neurotrophic factor Source MGI Symbol Acc MGI 107430
C10	UPFM0856761	ENSMUST00000077902.4	Gfap	ENSMUSG0000020932	glial fibrillary acidic protein Source MGI Symbol Acc MGI 95697
	UPFM083513	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	5	001112.13	Grk4	000052783	G protein-coupled receptor kinase 4 Source MGI Symbol Acc MGI 95801
C12	UPFM0981418	ENSMUST00000236876.1	Grk5	ENSMUSG0000003228	G protein-coupled receptor kinase 5 Source MGI Symbol Acc MGI 109161
D01	UPFM0906097	ENSMUST00000099482.4	Grk6	ENSMUSG00000074886	G protein-coupled receptor kinase 6 Source MGI Symbol Acc MGI 1347078
D02	UPFM0961696	ENSMUST00000206654.1	Gsk3a	ENSMUSG00000057177	glycogen synthase kinase 3 alpha Source MGI Symbol Acc MGI 2152453
D03	UPFM0986877	ENSMUST00000114750.1	Gsk3b	ENSMUSG00000022812	glycogen synthase kinase 3 beta Source MGI Symbol Acc MGI 1861437
D04	UPFM0710454	ENSMUST00000022235.5	Htr1a	ENSMUSG00000021721	5-hydroxytryptamine (serotonin) receptor 1A Source MGI Symbol Acc MGI 96273
D05	UPFM0647715	ENSMUST00000051005.4	Htr1b	ENSMUSG00000049511	5-hydroxytryptamine (serotonin) receptor 1B Source MGI Symbol Acc MGI 96274
D06	UPFM0901510	ENSMUST00000117699.1	Htr1d	ENSMUSG00000070687	5-hydroxytryptamine (serotonin) receptor 1D Source MGI Symbol Acc MGI 96276
D07	UPFM0815503	ENSMUST00000063076.5	Htr1f	ENSMUSG00000050783	5-hydroxytryptamine (serotonin) receptor 1F Source MGI Symbol Acc MGI 99842
D08	UPFM0973579	ENSMUST00000036653.4	Htr2a	ENSMUSG00000034997	5-hydroxytryptamine (serotonin) receptor 2A Source MGI Symbol Acc MGI 109521
D09	UPFM1126309	ENSMUST00000155077.1	Htr2b	ENSMUSG00000026228	5-hydroxytryptamine (serotonin) receptor 2B Source MGI Symbol Acc MGI 109323
D10	UPFM0907429	ENSMUST00000112831.2	Htr2c	ENSMUSG00000041380	5-hydroxytryptamine (serotonin) receptor 2C Source MGI Symbol Acc MGI 96281
D11	UPFM0739376	ENSMUST00000217289.1	Htr3a	ENSMUSG00000032269	5-hydroxytryptamine (serotonin) receptor 3A Source MGI Symbol Acc MGI 96282
D12	UPFM0895002	ENSMUST00000008734.4	Htr3b	ENSMUSG00000008590	5-hydroxytryptamine (serotonin) receptor 3B Source MGI Symbol Acc MGI 1861899
E01	UPFM0937676	ENSMUST00000237114.1	Htr4	ENSMUSG00000026322	5 hydroxytryptamine (serotonin) receptor 4 Source MGI Symbol Acc MGI 109246
E02	UPFM0754510	ENSMUST00000036227.6	Htr5a	ENSMUSG00000039106	5-hydroxytryptamine (serotonin) receptor 5A Source MGI Symbol Acc MGI 96283
E03	UPFM0624907	ENSMUST00000068036.1	Htr6	ENSMUSG00000028747	5-hydroxytryptamine (serotonin) receptor 6 Source MGI Symbol Acc MGI 1196627
E04	UPFM0938127	ENSMUST00000164781.1	Htr7	ENSMUSG00000024798	5-hydroxytryptamine (serotonin) receptor 7 Source MGI Symbol Acc MGI 99841
E05	UPFM0984215	ENSMUST00000203995.1	Itpr1	ENSMUSG00000030102	inositol 1,4,5-trisphosphate receptor 1 Source MGI Symbol Acc MGI 96623
E06	UPFM0728915	ENSMUST00000026013.5	Maooa	ENSMUSG00000025037	monoamine oxidase A Source MGI Symbol Acc MGI 96915
E07	UPFM0709877	ENSMUST00000040820.12	Maob	ENSMUSG00000040147	monoamine oxidase B Source MGI Symbol Acc MGI 96916
E08	UPFM0666259	ENSMUST00000232611.1	Mapk1	ENSMUSG00000063358	mitogen-activated protein kinase 1 Source MGI Symbol Acc MGI 1346858
E09	UPFM0715024	ENSMUST00000023779.7	Nr4a1	ENSMUSG00000023034	nuclear receptor subfamily 4, group A, member 1 Source MGI Symbol Acc MGI 1352454
E10	UPFM0806324	ENSMUST00000030025.9	Nr4a3	ENSMUSG00000028341	nuclear receptor subfamily 4, group A, member 3 Source MGI Symbol Acc MGI 1352457
E11	UPFM0900377	ENSMUST00000115715.7	Pde10a	ENSMUSG00000023868	phosphodiesterase 10A Source MGI Symbol Acc MGI 1345143
E12	UPFM0999422	ENSMUST00000039413.14	Pde4a	ENSMUSG00000032177	phosphodiesterase 4A, cAMP specific Source MGI Symbol Acc MGI 99558
F01	UPFM0873615	ENSMUST00000106904.8	Pde4b	ENSMUSG00000028525	phosphodiesterase 4B, cAMP specific Source MGI Symbol Acc MGI 99557
F02	UPFM0959341	ENSMUST00000149272.1	Pde4c	ENSMUSG00000031842	phosphodiesterase 4C, cAMP specific Source MGI Symbol Acc MGI 99556
F03	UPFM0869610	ENSMUST00000153234.7	Pde4d	ENSMUSG00000021699	phosphodiesterase 4D, cAMP specific Source MGI Symbol Acc MGI 99555
F04	UPFM0663131	ENSMUST00000152113.1	Pdyn	ENSMUSG00000027400	prodynorphin Source MGI Symbol Acc MGI 97535
F05	UPFM0708438	ENSMUST00000108243.7	Pik3ca	ENSMUSG00000027665	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source MGI Symbol Acc MGI 1206581
F06	UPFM0802127	ENSMUST00000053215.13	Pik3cg	ENSMUSG00000020573	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma Source MGI Symbol Acc MGI 1353576
F07	UPFM0738339	ENSMUST00000102513.7	Pla2g5	ENSMUSG00000041193	phospholipase A2, group V Source MGI Symbol Acc MGI 101899
F08	UPFM0623683	ENSMUST00000130524.4	Plcb1	ENSMUSG00000051177	phospholipase C, beta 1 Source MGI Symbol Acc MGI 97613
F09	UPFM0886181	ENSMUST00000102524.7	Plcb2	ENSMUSG00000040061	phospholipase C, beta 2 Source MGI Symbol Acc MGI 107465
F10	UPFM0973210	ENSMUST00000237726.1	Plcb3	ENSMUSG00000024960	phospholipase C, beta 3 Source MGI Symbol Acc MGI 104778

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM077630 5	ENSMUST00000 137634.1	Ppp1r1b	ENSMUSG00 000061718	protein phosphatase 1, regulatory inhibitor subunit 1B Source MGI Symbol Acc MGI 94860
F12	UPFM091850 5	ENSMUST00000 211558.1	Prkaca	ENSMUSG00 000005469	protein kinase, cAMP dependent, catalytic, alpha Source MGI Symbol Acc MGI 97592
G01	UPFM100449 2	ENSMUST00000 190784.1	Ptgs2	ENSMUSG00 000032487	prostaglandin-endoperoxide synthase 2 Source MGI Symbol Acc MGI 97798
G02	UPFM089152 9	ENSMUST00000 148856.1	Slc18a1	ENSMUSG00 000036330	solute carrier family 18 (vesicular monoamine), member 1 Source MGI Symbol Acc MGI 106684
G03	UPFM078623 2	ENSMUST00000 026084.4	Slc18a2	ENSMUSG00 000025094	solute carrier family 18 (vesicular monoamine), member 2 Source MGI Symbol Acc MGI 106677
G04	UPFM070741 7	ENSMUST00000 022100.6	Slc6a3	ENSMUSG00 000021609	solute carrier family 6 (neurotransmitter transporter, dopamine), member 3 Source MGI Symbol Acc MGI 94862
G05	UPFM072077 6	ENSMUST00000 021195.10	Slc6a4	ENSMUSG00 000020838	solute carrier family 6 (neurotransmitter transporter, serotonin), member 4 Source MGI Symbol Acc MGI 96285
G06	UPFM064366 2	ENSMUST00000 163779.7	Snca	ENSMUSG00 000025889	synuclein, alpha Source MGI Symbol Acc MGI 1277151
G07	UPFM063695 0	ENSMUST00000 179625.7	Sncaip	ENSMUSG00 000024534	synuclein, alpha interacting protein (synphilin) Source MGI Symbol Acc MGI 1915097
G08	UPFM098726 0	ENSMUST00000 169345.3	Syn2	ENSMUSG00 000009394	synapsin II Source MGI Symbol Acc MGI 103020
G09	UPFM079062 1	ENSMUST00000 137974.1	Tdo2	ENSMUSG00 000028011	tryptophan 2,3-dioxygenase Source MGI Symbol Acc MGI 1928486
G10	UPFM076005 4	ENSMUST00000 000219.9	Th	ENSMUSG00 000000214	tyrosine hydroxylase Source MGI Symbol Acc MGI 98735
G11	UPFM076531 9	ENSMUST00000 172386.7	Tph1	ENSMUSG00 000040046	tryptophan hydroxylase 1 Source MGI Symbol Acc MGI 98796
G12	UPFM086949 9	ENSMUST00000 006949.8	Tph2	ENSMUSG00 000006764	tryptophan hydroxylase 2 Source MGI Symbol Acc MGI 2651811
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.

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