

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

## Mouse Neuronal Ion Channels

Cat. no. 249955 UPMM-036ZR

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	Asic2	Asic1	Asic3	Best1	Caana1a	Caana1b	Caana1c	Caana1d	Caana1g	Caana1i	Caarb1	Caarb2
B	Caarb3	Caarb2	Caarb4	Clcn2	Clcn3	Clcn7	Hcn1	Hcn2	Kcna1	Kcna2	Kcna5	Kcna6
C	Kcnab1	Kcnab2	Kcnab3	Kcnb1	Kcnb2	Kcnc1	Kcnc2	Kcnd2	Kcnd3	Kcnh1	Kcnh2	Kcnh3
D	Kcnh6	Kcnh7	Kcnj1	Kcnj11	Kcnj12	Kcnj13	Kcnj14	Kcnj15	Kcnj16	Kcnj2	Kcnj3	Kcnj4
E	Kcnj5	Kcnj6	Kcnj9	Kcnk1	Kenma1	Kenmb4	Kcnn1	Kcnn2	Kcnn3	Kcnq1	Kcnq2	Kcnq3
F	Kens1	Ryr3	Scn10a	Scn11a	Scn1a	Scn1b	Scn2a	Scn2b	Scn3a	Scn8a	Scn9a	Slc12a5
G	Trpa1	Trpc1	Trpc3	Trpc6	Trpm1	Trpm2	Trpm6	Trpm8	Trpv1	Trpv2	Trpv3	Trpv4
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	QIC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM077914 8	ENSMUST00000 021045.12	Asic2	ENSMUSG00 000020704	acid-sensing (proton-gated) ion channel 2 Source MGI Symbol Acc MGI 1100867
A02	UPFM095653 9	ENSMUST00000 228185.1	Asic1	ENSMUSG00 000023017	acid-sensing (proton-gated) ion channel 1 Source MGI Symbol Acc MGI 1194915
A03	UPFM083770 4	ENSMUST00000 049346.9	Asic3	ENSMUSG00 000038276	acid-sensing (proton-gated) ion channel 3 Source MGI Symbol Acc MGI 2159339
A04	UPFM082581 0	ENSMUST00000 117346.1	Best1	ENSMUSG00 000037418	bestrophin 1 Source MGI Symbol Acc MGI 1346332
A05	UPFM065825 3	ENSMUST00000 144879.7	Cacna1a	ENSMUSG00 000034656	calcium channel, voltage-dependent, P/Q type, alpha 1A subunit Source MGI Symbol Acc MGI 109482
A06	UPFM072097 4	ENSMUST00000 041342.11	Cacna1b	ENSMUSG00 000004113	calcium channel, voltage-dependent, N type, alpha 1B subunit Source MGI Symbol Acc MGI 88296
A07	UPFM066844 8	ENSMUST00000 112790.8	Cacna1c	ENSMUSG00 000051331	calcium channel, voltage-dependent, L type, alpha 1C subunit Source MGI Symbol Acc MGI 103013
A08	UPFM069270 0	ENSMUST00000 112249.8	Cacna1d	ENSMUSG00 000015968	calcium channel, voltage-dependent, L type, alpha 1D subunit Source MGI Symbol Acc MGI 88293
A09	UPFM071792 2	ENSMUST00000 107789.7	Cacna1g	ENSMUSG00 000020866	calcium channel, voltage-dependent, T type, alpha 1G subunit Source MGI Symbol Acc MGI 1201678
A10	UPFM079446 4	ENSMUST00000 162913.7	Cacna1i	ENSMUSG00 000022416	calcium channel, voltage-dependent, alpha 1I subunit Source MGI Symbol Acc MGI 2178051
A11	UPFM075389 5	ENSMUST00000 017552.12	Cacnb1	ENSMUSG00 000020882	calcium channel, voltage-dependent, beta 1 subunit Source MGI Symbol Acc MGI 102522
A12	UPFM094008 7	ENSMUST00000 194921.5	Cacnb2	ENSMUSG00 000057914	calcium channel, voltage-dependent, beta 2 subunit Source MGI Symbol Acc MGI 894644
B01	UPFM092012 6	ENSMUST00000 003442.8	Cacnb3	ENSMUSG00 000003352	calcium channel, voltage-dependent, beta 3 subunit Source MGI Symbol Acc MGI 103307
B02	UPFM080528 6	ENSMUST00000 019290.2	Cacng2	ENSMUSG00 000019146	calcium channel, voltage-dependent, gamma subunit 2 Source MGI Symbol Acc MGI 1316660
B03	UPFM062160 1	ENSMUST00000 134076.1	Cacng4	ENSMUSG00 000020723	calcium channel, voltage-dependent, gamma subunit 4 Source MGI Symbol Acc MGI 1859167
B04	UPFM063166 7	ENSMUST00000 153075.7	Clcn2	ENSMUSG00 000022843	chloride channel, voltage-sensitive 2 Source MGI Symbol Acc MGI 105061
B05	UPFM083457 6	ENSMUST00000 004430.13	Clcn3	ENSMUSG00 000004319	chloride channel, voltage-sensitive 3 Source MGI Symbol Acc MGI 103555
B06	UPFM085274 0	ENSMUST00000 159773.1	Clcn7	ENSMUSG00 000036636	chloride channel, voltage-sensitive 7 Source MGI Symbol Acc MGI 1347048
B07	UPFM068607 7	ENSMUST00000 006991.8	Hcn1	ENSMUSG00 000021730	hyperpolarization-activated, cyclic nucleotide-gated K+ 1 Source MGI Symbol Acc MGI 1096392
B08	UPFM096122 8	ENSMUST00000 020581.2	Hcn2	ENSMUSG00 000020331	hyperpolarization-activated, cyclic nucleotide-gated K+ 2 Source MGI Symbol Acc MGI 1298210
B09	UPFM071169 0	ENSMUST00000 055168.4	Kcna1	ENSMUSG00 000047976	potassium voltage-gated channel, shaker-related subfamily, member 1 Source MGI Symbol Acc MGI 96654
B10	UPFM089155 0	ENSMUST00000 196403.1	Kcna2	ENSMUSG00 000040724	potassium voltage-gated channel, shaker-related subfamily, member 2 Source MGI Symbol Acc MGI 96659
B11	UPFM084005 2	ENSMUST00000 060972.4	Kcna5	ENSMUSG00 000045534	potassium voltage-gated channel, shaker-related subfamily, member 5 Source MGI Symbol Acc MGI 96662
B12	UPFM077331 2	ENSMUST00000 040751.5	Kcna6	ENSMUSG00 000038077	potassium voltage-gated channel, shaker-related, subfamily, member 6 Source MGI Symbol Acc MGI 96663
C01	UPFM093150 3	ENSMUST00000 161404.7	Kcnab1	ENSMUSG00 000027827	potassium voltage-gated channel, shaker-related subfamily, beta member 1 Source MGI Symbol Acc MGI 109155
C02	UPFM071013 8	ENSMUST00000 161496.7	Kcnab2	ENSMUSG00 000028931	potassium voltage-gated channel, shaker-related subfamily, beta member 2 Source MGI Symbol Acc MGI 109239
C03	UPFM068847 7	ENSMUST00000 142328.7	Kcnab3	ENSMUSG00 000018470	potassium voltage-gated channel, shaker-related subfamily, beta member 3 Source MGI Symbol Acc MGI 1336208
C04	UPFM063747 8	ENSMUST00000 059826.9	Kcnb1	ENSMUSG00 000050556	potassium voltage gated channel, Shab-related subfamily, member 1 Source MGI Symbol Acc MGI 96666
C05	UPFM086181 9	ENSMUST00000 175681.2	Kcnb2	ENSMUSG00 000092083	potassium voltage gated channel, Shab-related subfamily, member 2 Source MGI Symbol Acc MGI 99632
C06	UPFM086879 4	ENSMUST00000 160433.2	Kcnc1	ENSMUSG00 000058975	potassium voltage gated channel, Shaw-related subfamily, member 1 Source MGI Symbol Acc MGI 96667
C07	UPFM089073 3	ENSMUST00000 218445.1	Kcnc2	ENSMUSG00 000035681	potassium voltage gated channel, Shaw-related subfamily, member 2 Source MGI Symbol Acc MGI 96668
C08	UPFM094687 3	ENSMUST00000 081542.5	Kcnd2	ENSMUSG00 000060882	potassium voltage-gated channel, Shal-related family, member 2 Source MGI Symbol Acc MGI 102663
C09	UPFM069937 3	ENSMUST00000 141694.1	Kcnd3	ENSMUSG00 000040896	potassium voltage-gated channel, Shal-related family, member 3 Source MGI Symbol Acc MGI 1928743
C10	UPFM092653 8	ENSMUST00000 078470.11	Kcnh1	ENSMUSG00 000058248	potassium voltage-gated channel, subfamily H (eag-related), member 1 Source MGI Symbol Acc MGI 1341721
	UPFM089610	ENSMUST00000		ENSMUSG00	potassium voltage-gated channel, subfamily H (eag-related), member 2 Source

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	6	036092.9	Kcnh2	000038319	MGI Symbol Acc MGI 1341722
C12	UPFM089545 6	ENSMUST00000 041415.4	Kcnh3	ENSMUSG00 000037579	potassium voltage-gated channel, subfamily H (eag-related), member 3 Source MGI Symbol Acc MGI 1341723
D01	UPFM095390 1	ENSMUST00000 145539.1	Kcnh6	ENSMUSG00 000001901	potassium voltage-gated channel, subfamily H (eag-related), member 6 Source MGI Symbol Acc MGI 2684139
D02	UPFM071245 8	ENSMUST00000 112454.7	Kcnh7	ENSMUSG00 000059742	potassium voltage-gated channel, subfamily H (eag-related), member 7 Source MGI Symbol Acc MGI 2159566
D03	UPFM097751 4	ENSMUST00000 047334.9	Kcnj1	ENSMUSG00 000041248	potassium inwardly-rectifying channel, subfamily J, member 1 Source MGI Symbol Acc MGI 1927248
D04	UPFM077077 8	ENSMUST00000 209881.1	Kcnj11	ENSMUSG00 000096146	potassium inwardly rectifying channel, subfamily J, member 11 Source MGI Symbol Acc MGI 107501
D05	UPFM091954 7	ENSMUST00000 108717.2	Kcnj12	ENSMUSG00 000042529	potassium inwardly-rectifying channel, subfamily J, member 12 Source MGI Symbol Acc MGI 108495
D06	UPFM065350 4	ENSMUST00000 174179.1	Kcnj13	ENSMUSG00 000079436	potassium inwardly-rectifying channel, subfamily J, member 13 Source MGI Symbol Acc MGI 3781032
D07	UPFM087848 7	ENSMUST00000 071937.6	Kcnj14	ENSMUSG00 000058743	potassium inwardly-rectifying channel, subfamily J, member 14 Source MGI Symbol Acc MGI 2384820
D08	UPFM073911 4	ENSMUST00000 113854.7	Kcnj15	ENSMUSG00 000062609	potassium inwardly-rectifying channel, subfamily J, member 15 Source MGI Symbol Acc MGI 1310000
D09	UPFM089341 9	ENSMUST00000 178798.1	Kcnj16	ENSMUSG00 000051497	potassium inwardly-rectifying channel, subfamily J, member 16 Source MGI Symbol Acc MGI 1314842
D10	UPFM064617 1	ENSMUST00000 042970.2	Kcnj2	ENSMUSG00 000041695	potassium inwardly-rectifying channel, subfamily J, member 2 Source MGI Symbol Acc MGI 104744
D11	UPFM092380 9	ENSMUST00000 067101.9	Kcnj3	ENSMUSG00 000026824	potassium inwardly-rectifying channel, subfamily J, member 3 Source MGI Symbol Acc MGI 104742
D12	UPFM076617 3	ENSMUST00000 057801.7	Kcnj4	ENSMUSG00 000044216	potassium inwardly-rectifying channel, subfamily J, member 4 Source MGI Symbol Acc MGI 104743
E01	UPFM087333 6	ENSMUST00000 214223.1	Kcnj5	ENSMUSG00 000032034	potassium inwardly-rectifying channel, subfamily J, member 5 Source MGI Symbol Acc MGI 104755
E02	UPFM077247 9	ENSMUST00000 232128.1	Kcnj6	ENSMUSG00 000043301	potassium inwardly-rectifying channel, subfamily J, member 6 Source MGI Symbol Acc MGI 104781
E03	UPFM083165 7	ENSMUST00000 194860.1	Kcnj9	ENSMUSG00 000038026	potassium inwardly-rectifying channel, subfamily J, member 9 Source MGI Symbol Acc MGI 108007
E04	UPFM069571 4	ENSMUST00000 046765.9	Kcnk1	ENSMUSG00 000033998	potassium channel, subfamily K, member 1 Source MGI Symbol Acc MGI 109322
E05	UPFM082331 1	ENSMUST00000 225305.1	Kcnma1	ENSMUSG00 000063142	potassium large conductance calcium-activated channel, subfamily M, alpha member 1 Source MGI Symbol Acc MGI 99923
E06	UPFM078134 1	ENSMUST00000 091477.3	Kcnmb4	ENSMUSG00 000054934	potassium large conductance calcium-activated channel, subfamily M, beta member 4 Source MGI Symbol Acc MGI 1913272
E07	UPFM075998 1	ENSMUST00000 110081.9	Kcnn1	ENSMUSG00 000002908	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 1 Source MGI Symbol Acc MGI 1933993
E08	UPFM090999 0	ENSMUST00000 236405.1	Kcnn2	ENSMUSG00 000054477	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2 Source MGI Symbol Acc MGI 2153182
E09	UPFM091715 0	ENSMUST00000 000811.7	Kcnn3	ENSMUSG00 000000794	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3 Source MGI Symbol Acc MGI 2153183
E10	UPFM084305 7	ENSMUST00000 185383.1	Kcnq1	ENSMUSG00 000009545	potassium voltage-gated channel, subfamily Q, member 1 Source MGI Symbol Acc MGI 108083
E11	UPFM094359 7	ENSMUST00000 149964.8	Kcnq2	ENSMUSG00 000016346	potassium voltage-gated channel, subfamily Q, member 2 Source MGI Symbol Acc MGI 1309503
E12	UPFM091797 6	ENSMUST00000 183354.1	Kcnq3	ENSMUSG00 000056258	potassium voltage-gated channel, subfamily Q, member 3 Source MGI Symbol Acc MGI 1336181
F01	UPFM075850 1	ENSMUST00000 045196.3	Kcns1	ENSMUSG00 000040164	K+ voltage-gated channel, subfamily S, 1 Source MGI Symbol Acc MGI 1197019
F02	UPFM073537 5	ENSMUST00000 207603.1	Ryr3	ENSMUSG00 000057378	ryanodine receptor 3 Source MGI Symbol Acc MGI 99684
F03	UPFM100475 2	ENSMUST00000 216583.1	Scn10a	ENSMUSG00 000034533	sodium channel, voltage-gated, type X, alpha Source MGI Symbol Acc MGI 108029
F04	UPFM078889 1	ENSMUST00000 215718.1	Scn11a	ENSMUSG00 000034115	sodium channel, voltage-gated, type XI, alpha Source MGI Symbol Acc MGI 1345149
F05	UPFM071401 9	ENSMUST00000 094951.9	Scn1a	ENSMUSG00 000064329	sodium channel, voltage-gated, type I, alpha Source MGI Symbol Acc MGI 98246
F06	UPFM096095 9	ENSMUST00000 098548.7	Scn1b	ENSMUSG00 000019194	sodium channel, voltage-gated, type I, beta Source MGI Symbol Acc MGI 98247
F07	UPFM083510 5	ENSMUST00000 028377.13	Scn2a	ENSMUSG00 000075318	sodium channel, voltage-gated, type II, alpha Source MGI Symbol Acc MGI 98248
F08	UPFM074641 4	ENSMUST00000 170998.8	Scn2b	ENSMUSG00 000070304	sodium channel, voltage-gated, type II, beta Source MGI Symbol Acc MGI 106921
F09	UPFM095481 3	ENSMUST00000 100069.8	Scn3a	ENSMUSG00 000057182	sodium channel, voltage-gated, type III, alpha Source MGI Symbol Acc MGI 98249
F10	UPFM065616 6	ENSMUST00000 108910.9	Scn8a	ENSMUSG00 000023033	sodium channel, voltage-gated, type VIII, alpha Source MGI Symbol Acc MGI 103169

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM084475 3	ENSMUST00000 100064.8	Scn9a	ENSMUSG00 000075316	sodium channel, voltage-gated, type IX, alpha Source MGI Symbol Acc MGI 107636
F12	UPFM068622 5	ENSMUST00000 135918.1	Slc12a5	ENSMUSG00 000017740	solute carrier family 12, member 5 Source MGI Symbol Acc MGI 1862037
G01	UPFM090162 9	ENSMUST00000 235071.1	Trpa1	ENSMUSG00 000032769	transient receptor potential cation channel, subfamily A, member 1 Source MGI Symbol Acc MGI 3522699
G02	UPFM091092 1	ENSMUST00000 190604.6	Trpc1	ENSMUSG00 000032839	transient receptor potential cation channel, subfamily C, member 1 Source MGI Symbol Acc MGI 109528
G03	UPFM091308 6	ENSMUST00000 029271.4	Trpc3	ENSMUSG00 000032839	transient receptor potential cation channel, subfamily C, member 3 Source MGI Symbol Acc MGI 109526
G04	UPFM092284 2	ENSMUST00000 050433.7	Trpc6	ENSMUSG00 000031997	transient receptor potential cation channel, subfamily C, member 6 Source MGI Symbol Acc MGI 109523
G05	UPFM090522 9	ENSMUST00000 205348.1	Trpm1	ENSMUSG00 000030523	transient receptor potential cation channel, subfamily M, member 1 Source MGI Symbol Acc MGI 1330305
G06	UPFM063966 2	ENSMUST00000 217806.1	Trpm2	ENSMUSG00 000009292	transient receptor potential cation channel, subfamily M, member 2 Source MGI Symbol Acc MGI 1351901
G07	UPFM066599 2	ENSMUST00000 040489.8	Trpm6	ENSMUSG00 000024727	transient receptor potential cation channel, subfamily M, member 6 Source MGI Symbol Acc MGI 2675603
G08	UPFM074100 8	ENSMUST00000 040210.13	Trpm8	ENSMUSG00 000036251	transient receptor potential cation channel, subfamily M, member 8 Source MGI Symbol Acc MGI 2181435
G09	UPFM071411 0	ENSMUST00000 128113.1	Trpv1	ENSMUSG00 000005952	transient receptor potential cation channel, subfamily V, member 1 Source MGI Symbol Acc MGI 1341787
G10	UPFM100388 9	ENSMUST00000 018651.13	Trpv2	ENSMUSG00 000018507	transient receptor potential cation channel, subfamily V, member 2 Source MGI Symbol Acc MGI 1341836
G11	UPFM065838 2	ENSMUST00000 049676.2	Trpv3	ENSMUSG00 000043029	transient receptor potential cation channel, subfamily V, member 3 Source MGI Symbol Acc MGI 2181407
G12	UPFM069734 9	ENSMUST00000 112222.7	Trpv4	ENSMUSG00 000014158	transient receptor potential cation channel, subfamily V, member 4 Source MGI Symbol Acc MGI 1926945
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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