

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

## Mouse Drug Transporters

Cat. no. 249955 UPMM-070ZA

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	Abca1	Abca12	Abca13	Abca2	Abca3	Abca4	Abca9	Abcb11	Abcb1a	Abcb1b	Abcb4	Abcb5
B	Abcb6	Abcc1	Abcc10	Abcc12	Abcc2	Abcc3	Abcc4	Abcc5	Abcc6	Abcd1	Abcd3	Abcd4
C	Abcf1	Abcg2	Abcg8	Aap1	Aap7	Aap9	Atp6v0c	Atp7a	Atp7b	Mvp	Slc10a1	Slc10a2
D	Slc15a1	Slc15a2	Slc16a1	Slc16a2	Slc16a3	Slc19a1	Slc19a2	Slc22a1	Slc22a19	Slc22a2	Slc22a3	Slc22a6
E	Slc22a7	Slc22a8	Slc25a13	Slc28a1	Slc28a2	Slc29a1	Slc29a2	Slc2a1	Slc2a2	Slc2a3	Slc31a1	Slc38a2
F	Slc38a5	Slc3a1	Slc3a2	Slc5a1	Slc5a4a	Slc7a11	Slc7a4	Slc7a5	Slc7a6	Slc7a7	Slc7a8	Slc7a9
G	Slco1a4	Slco1a5	Slco1a6	Slco1b2	Slco2a1	Slco2b1	Slco3a1	Slco4a1	Tap1	Tap2	Vdac1	Vdac2
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	UPFM100791 3	ENSMUST00000 030010.3	Abca1	ENSMUSG00 000015243	ATP-binding cassette, sub-family A (ABC1), member 1 Source MGI Symbol Acc MGI 99607
A02	UPFM071095 4	ENSMUST00000 187097.6	Abca12	ENSMUSG00 000050296	ATP-binding cassette, sub-family A (ABC1), member 12 Source MGI Symbol Acc MGI 2676312
A03	UPFM064797 4	ENSMUST00000 042740.12	Abca13	ENSMUSG00 000004668	ATP-binding cassette, sub-family A (ABC1), member 13 Source MGI Symbol Acc MGI 2388707
A04	UPFM100893 3	ENSMUST00000 149385.7	Abca2	ENSMUSG00 000026944	ATP-binding cassette, sub-family A (ABC1), member 2 Source MGI Symbol Acc MGI 99606
A05	UPFM079412 8	ENSMUST00000 149233.7	Abca3	ENSMUSG00 000024130	ATP-binding cassette, sub-family A (ABC1), member 3 Source MGI Symbol Acc MGI 1351617
A06	UPFM091596 5	ENSMUST00000 136358.2	Abca4	ENSMUSG00 000028125	ATP-binding cassette, sub-family A (ABC1), member 4 Source MGI Symbol Acc MGI 109424
A07	UPFM069026 6	ENSMUST00000 126499.1	Abca9	ENSMUSG00 000041797	ATP-binding cassette, sub-family A (ABC1), member 9 Source MGI Symbol Acc MGI 2386796
A08	UPFM090462 3	ENSMUST00000 102710.9	Abcb11	ENSMUSG00 000027048	ATP-binding cassette, sub-family B (MDR/TAP), member 11 Source MGI Symbol Acc MGI 1351619
A09	UPFM078360 9	ENSMUST00000 047753.4	Abcb1a	ENSMUSG00 000040584	ATP-binding cassette, sub-family B (MDR/TAP), member 1A Source MGI Symbol Acc MGI 97570
A10	UPFM082542 2	ENSMUST00000 009058.9	Abcb1b	ENSMUSG00 000028970	ATP-binding cassette, sub-family B (MDR/TAP), member 1B Source MGI Symbol Acc MGI 97568
A11	UPFM071083 0	ENSMUST00000 003717.12	Abcb4	ENSMUSG00 000042476	ATP-binding cassette, sub-family B (MDR/TAP), member 4 Source MGI Symbol Acc MGI 97569
A12	UPFM062571 0	ENSMUST00000 100982.4	Abcb5	ENSMUSG00 000072791	ATP-binding cassette, sub-family B (MDR/TAP), member 5 Source MGI Symbol Acc MGI 1924956
B01	UPFM090896 4	ENSMUST00000 160757.1	Abcb6	ENSMUSG00 000026198	ATP-binding cassette, sub-family B (MDR/TAP), member 6 Source MGI Symbol Acc MGI 1921354
B02	UPFM076608 4	ENSMUST00000 144676.2	Abcc1	ENSMUSG00 000023088	ATP-binding cassette, sub-family C (CFTR/MRP), member 1 Source MGI Symbol Acc MGI 102676
B03	UPFM073929 7	ENSMUST00000 047970.13	Abcc10	ENSMUSG00 000032842	ATP-binding cassette, sub-family C (CFTR/MRP), member 10 Source MGI Symbol Acc MGI 2386976
B04	UPFM086984 0	ENSMUST00000 131806.7	Abcc12	ENSMUSG00 000036872	ATP-binding cassette, sub-family C (CFTR/MRP), member 12 Source MGI Symbol Acc MGI 2441679
B05	UPFM098936 3	ENSMUST00000 143553.1	Abcc2	ENSMUSG00 000025194	ATP-binding cassette, sub-family C (CFTR/MRP), member 2 Source MGI Symbol Acc MGI 1352447
B06	UPFM093412 1	ENSMUST00000 021231.7	Abcc3	ENSMUSG00 000020865	ATP-binding cassette, sub-family C (CFTR/MRP), member 3 Source MGI Symbol Acc MGI 1923658
B07	UPFM091852 3	ENSMUST00000 228848.1	Abcc4	ENSMUSG00 000032849	ATP-binding cassette, sub-family C (CFTR/MRP), member 4 Source MGI Symbol Acc MGI 2443111
B08	UPFM093649 1	ENSMUST00000 096199.4	Abcc5	ENSMUSG00 000022822	ATP-binding cassette, sub-family C (CFTR/MRP), member 5 Source MGI Symbol Acc MGI 1351644
B09	UPFM098700 2	ENSMUST00000 002850.7	Abcc6	ENSMUSG00 000030834	ATP-binding cassette, sub-family C (CFTR/MRP), member 6 Source MGI Symbol Acc MGI 1351634
B10	UPFM089732 9	ENSMUST00000 114461.2	Abcd1	ENSMUSG00 000031378	ATP-binding cassette, sub-family D (ALD), member 1 Source MGI Symbol Acc MGI 1349215
B11	UPFM066562 2	ENSMUST00000 197662.4	Abcd3	ENSMUSG00 000028127	ATP-binding cassette, sub-family D (ALD), member 3 Source MGI Symbol Acc MGI 1349216
B12	UPFM099445 3	ENSMUST00000 223107.1	Abcd4	ENSMUSG00 000021240	ATP-binding cassette, sub-family D (ALD), member 4 Source MGI Symbol Acc MGI 1349217
C01	UPFM080478 8	ENSMUST00000 172661.1	Abcf1	ENSMUSG00 000038762	ATP-binding cassette, sub-family F (GCN20), member 1 Source MGI Symbol Acc MGI 1351658
C02	UPFM086112 9	ENSMUST00000 147213.7	Abcg2	ENSMUSG00 000029802	ATP binding cassette subfamily G member 2 (Junior blood group) Source MGI Symbol Acc MGI 1347061
C03	UPFM089907 8	ENSMUST00000 045714.14	Abcg8	ENSMUSG00 000024254	ATP binding cassette subfamily G member 8 Source MGI Symbol Acc MGI 1914720
C04	UPFM093390 2	ENSMUST00000 004774.3	Aqp1	ENSMUSG00 000004655	aquaporin 1 Source MGI Symbol Acc MGI 103201
C05	UPFM073047 6	ENSMUST00000 030136.12	Aqp7	ENSMUSG00 000028427	aquaporin 7 Source MGI Symbol Acc MGI 1314647
C06	UPFM079002 7	ENSMUST00000 113570.7	Aqp9	ENSMUSG00 000032204	aquaporin 9 Source MGI Symbol Acc MGI 1891066
C07	UPFM096946 7	ENSMUST00000 024932.11	Atp6v0c	ENSMUSG00 000024121	ATPase, H+ transporting, lysosomal V0 subunit C Source MGI Symbol Acc MGI 88116
C08	UPFM073337 8	ENSMUST00000 133875.1	Atp7a	ENSMUSG00 000033792	ATPase, Cu++ transporting, alpha polypeptide Source MGI Symbol Acc MGI 99400
C09	UPFM097437 4	ENSMUST00000 110738.2	Atp7b	ENSMUSG00 000006567	ATPase, Cu++ transporting, beta polypeptide Source MGI Symbol Acc MGI 103297
C10	UPFM061835 8	ENSMUST00000 165096.8	Mvp	ENSMUSG00 000030681	major vault protein Source MGI Symbol Acc MGI 1925638
	UPFM086610	ENSMUST00000		ENSMUSG00	solute carrier family 10 (sodium/bile acid cotransporter family), member 1

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	6	218342.1	Slc10a1	000021135	Source MGI Symbol Acc MGI 97379
C12	UPFM096208 0	ENSMUST00000 023835.2	Slc10a2	ENSMUSG00 000023073	solute carrier family 10, member 2 Source MGI Symbol Acc MGI 1201406
D01	UPFM084632 1	ENSMUST00000 227372.1	Slc15a1	ENSMUSG00 000025557	solute carrier family 15 (oligopeptide transporter), member 1 Source MGI Symbol Acc MGI 1861376
D02	UPFM076233 2	ENSMUST00000 164579.7	Slc15a2	ENSMUSG00 000022899	solute carrier family 15 (H+/peptide transporter), member 2 Source MGI Symbol Acc MGI 1890457
D03	UPFM098222 4	ENSMUST00000 046212.1	Slc16a1	ENSMUSG00 000032902	solute carrier family 16 (monocarboxylic acid transporters), member 1 Source MGI Symbol Acc MGI 106013
D04	UPFM064371 4	ENSMUST00000 171837.1	Slc16a2	ENSMUSG00 000033965	solute carrier family 16 (monocarboxylic acid transporters), member 2 Source MGI Symbol Acc MGI 1203732
D05	UPFM068314 7	ENSMUST00000 140467.1	Slc16a3	ENSMUSG00 000025161	solute carrier family 16 (monocarboxylic acid transporters), member 3 Source MGI Symbol Acc MGI 1933438
D06	UPFM083847 1	ENSMUST00000 144234.7	Slc19a1	ENSMUSG00 000001436	solute carrier family 19 (folate transporter), member 1 Source MGI Symbol Acc MGI 103182
D07	UPFM092059 1	ENSMUST00000 044021.11	Slc19a2	ENSMUSG00 000040918	solute carrier family 19 (thiamine transporter), member 2 Source MGI Symbol Acc MGI 1928761
D08	UPFM099417 3	ENSMUST00000 024596.9	Slc22a1	ENSMUSG00 000023829	solute carrier family 22 (organic cation transporter), member 1 Source MGI Symbol Acc MGI 108111
D09	UPFM068643 6	ENSMUST00000 138317.1	Slc22a19	ENSMUSG00 000024757	solute carrier family 22 (organic anion transporter), member 19 Source MGI Symbol Acc MGI 2442751
D10	UPFM098357 6	ENSMUST00000 046959.8	Slc22a2	ENSMUSG00 000040966	solute carrier family 22 (organic cation transporter), member 2 Source MGI Symbol Acc MGI 1335072
D11	UPFM074632 6	ENSMUST00000 233535.1	Slc22a3	ENSMUSG00 000023828	solute carrier family 22 (organic cation transporter), member 3 Source MGI Symbol Acc MGI 1333817
D12	UPFM074853 8	ENSMUST00000 010250.3	Slc22a6	ENSMUSG00 000024650	solute carrier family 22 (organic anion transporter), member 6 Source MGI Symbol Acc MGI 892001
E01	UPFM064241 5	ENSMUST00000 233715.1	Slc22a7	ENSMUSG00 000067144	solute carrier family 22 (organic anion transporter), member 7 Source MGI Symbol Acc MGI 1859559
E02	UPFM082773 4	ENSMUST00000 010251.10	Slc22a8	ENSMUSG00 000063796	solute carrier family 22 (organic anion transporter), member 8 Source MGI Symbol Acc MGI 1336187
E03	UPFM089520 1	ENSMUST00000 015256.14	Slc25a13	ENSMUSG00 000015112	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 13 Source MGI Symbol Acc MGI 1354721
E04	UPFM082452 1	ENSMUST00000 026820.10	Slc28a1	ENSMUSG00 000025726	solute carrier family 28 (sodium-coupled nucleoside transporter), member 1 Source MGI Symbol Acc MGI 3605073
E05	UPFM084856 3	ENSMUST00000 110524.1	Slc28a2	ENSMUSG00 000027219	solute carrier family 28 (sodium-coupled nucleoside transporter), member 2 Source MGI Symbol Acc MGI 1913105
E06	UPFM068458 5	ENSMUST00000 168274.1	Slc29a1	ENSMUSG00 000023942	solute carrier family 29 (nucleoside transporters), member 1 Source MGI Symbol Acc MGI 1927073
E07	UPFM075551 9	ENSMUST00000 236152.1	Slc29a2	ENSMUSG00 000024891	solute carrier family 29 (nucleoside transporters), member 2 Source MGI Symbol Acc MGI 1345278
E08	UPFM099940 7	ENSMUST00000 208090.1	Slc2a1	ENSMUSG00 000028645	solute carrier family 2 (facilitated glucose transporter), member 1 Source MGI Symbol Acc MGI 95755
E09	UPFM062954 5	ENSMUST00000 029240.13	Slc2a2	ENSMUSG00 000027690	solute carrier family 2 (facilitated glucose transporter), member 2 Source MGI Symbol Acc MGI 1095438
E10	UPFM100859 5	ENSMUST00000 032476.10	Slc2a3	ENSMUSG00 000003153	solute carrier family 2 (facilitated glucose transporter), member 3 Source MGI Symbol Acc MGI 95757
E11	UPFM095680 6	ENSMUST00000 084526.11	Slc31a1	ENSMUSG00 000066150	solute carrier family 31, member 1 Source MGI Symbol Acc MGI 1333843
E12	UPFM089663 8	ENSMUST00000 023099.7	Slc38a2	ENSMUSG00 000022462	solute carrier family 38, member 2 Source MGI Symbol Acc MGI 1915010
F01	UPFM078216 3	ENSMUST00000 127103.7	Slc38a5	ENSMUSG00 000003170	solute carrier family 38, member 5 Source MGI Symbol Acc MGI 2148066
F02	UPFM077213 9	ENSMUST00000 024944.8	Slc3a1	ENSMUSG00 000024131	solute carrier family 3, member 1 Source MGI Symbol Acc MGI 1195264
F03	UPFM100041 6	ENSMUST00000 205377.1	Slc3a2	ENSMUSG00 000010095	solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2 Source MGI Symbol Acc MGI 96955
F04	UPFM073827 4	ENSMUST00000 011178.4	Slc5a1	ENSMUSG00 000011034	solute carrier family 5 (sodium/glucose cotransporter), member 1 Source MGI Symbol Acc MGI 107678
F05	UPFM098074 6	ENSMUST00000 020450.3	Slc5a4a	ENSMUSG00 000020229	solute carrier family 5, member 4a Source MGI Symbol Acc MGI 1927848
F06	UPFM068233 8	ENSMUST00000 142932.2	Slc7a11	ENSMUSG00 000027737	solute carrier family 7 (cationic amino acid transporter, y+ system), member 11 Source MGI Symbol Acc MGI 1347355
F07	UPFM083619 0	ENSMUST00000 232226.1	Slc7a4	ENSMUSG00 000022756	solute carrier family 7 (cationic amino acid transporter, y+ system), member 4 Source MGI Symbol Acc MGI 2146512
F08	UPFM084814 2	ENSMUST00000 182165.1	Slc7a5	ENSMUSG00 000040010	solute carrier family 7 (cationic amino acid transporter, y+ system), member 5 Source MGI Symbol Acc MGI 1298205
F09	UPFM070157 7	ENSMUST00000 212837.1	Slc7a6	ENSMUSG00 000031904	solute carrier family 7 (cationic amino acid transporter, y+ system), member 6 Source MGI Symbol Acc MGI 2142598
F10	UPFM069405 5	ENSMUST00000 195970.4	Slc7a7	ENSMUSG00 000000958	solute carrier family 7 (cationic amino acid transporter, y+ system), member 7 Source MGI Symbol Acc MGI 1337120

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM0817306	ENSMUST0000022787.7	Slc7a8	ENSMUSG0000022180	solute carrier family 7 (cationic amino acid transporter, y+ system), member 8 Source MGI Symbol Acc MGI 1355323
F12	UPFM0632517	ENSMUST00000118383.7	Slc7a9	ENSMUSG0000030492	solute carrier family 7 (cationic amino acid transporter, y+ system), member 9 Source MGI Symbol Acc MGI 1353656
G01	UPFM0715235	ENSMUST0000032364.13	Slco1a4	ENSMUSG0000030237	solute carrier organic anion transporter family, member 1a4 Source MGI Symbol Acc MGI 1351896
G02	UPFM0974048	ENSMUST00000111825.9	Slco1a5	ENSMUSG0000063975	solute carrier organic anion transporter family, member 1a5 Source MGI Symbol Acc MGI 1351865
G03	UPFM0985518	ENSMUST00000111827.3	Slco1a6	ENSMUSG0000079262	solute carrier organic anion transporter family, member 1a6 Source MGI Symbol Acc MGI 1351906
G04	UPFM0740845	ENSMUST0000042812.8	Slco1b2	ENSMUSG0000030236	solute carrier organic anion transporter family, member 1b2 Source MGI Symbol Acc MGI 1351899
G05	UPFM0674340	ENSMUST00000188664.1	Slco2a1	ENSMUSG0000032548	solute carrier organic anion transporter family, member 2a1 Source MGI Symbol Acc MGI 1346021
G06	UPFM0812550	ENSMUST00000107086.8	Slco2b1	ENSMUSG0000030737	solute carrier organic anion transporter family, member 2b1 Source MGI Symbol Acc MGI 1351872
G07	UPFM0837303	ENSMUST00000136389.1	Slco3a1	ENSMUSG0000025790	solute carrier organic anion transporter family, member 3a1 Source MGI Symbol Acc MGI 1351867
G08	UPFM0954378	ENSMUST0000038259.12	Slco4a1	ENSMUSG0000038963	solute carrier organic anion transporter family, member 4a1 Source MGI Symbol Acc MGI 1351866
G09	UPFM0694518	ENSMUST00000171148.1	Tap1	ENSMUSG0000037321	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP) Source MGI Symbol Acc MGI 98483
G10	UPFM0636416	ENSMUST00000127543.7	Tap2	ENSMUSG0000024339	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP) Source MGI Symbol Acc MGI 98484
G11	UPFM0958801	ENSMUST0000020673.2	Vdac1	ENSMUSG0000020402	voltage-dependent anion channel 1 Source MGI Symbol Acc MGI 106919
G12	UPFM0862244	ENSMUST00000147715.1	Vdac2	ENSMUSG0000021771	voltage-dependent anion channel 2 Source MGI Symbol Acc MGI 106915
H01	UPFM1132946	ENSMUST00000163829.1	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM1132947	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM1132948	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM1132949	ENSMUST0000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM1132950	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM1126609	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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