

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

## Mouse Unfolded Protein Response

Cat. no. 249955 UPMM-089ZA

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	Amfr	Aif4	Aif6	Aif6b	Atn3	Bax	Calr	Canx	Cct4	Cct7	Cebpb	Creb3
B	Creb3l3	Ddit3	Der1	Der12	Dnajb2	Dnajb9	Dnajc10	Dnajc3	Dnajc4	Edem1	Edem3	Eif2a
C	Eif2ak3	Ern1	Ern2	Ero1l	Ero1lb	Erp44	Fbxo6	Ganab	Ganc	Selenos	Harpud1	Hspa1l
D	Hspa2	Hspa4	Hspa4l	Hspa5	Hspb9	Hsph1	Htra2	Htra4	Insig1	Insig2	Manf	Mapk10
E	Mapk8	Mapk9	Mbtps1	Mbtps2	Nploc4	Nucb1	Os9	Pdia3	Pfdn2	Pfdn5	Ppia	Ppp1r15b
F	Prkcsb	Rnf139	Rnf5	Rpn1	Scap	Sec62	Sec63	Sel1l	Serp1	Sil1	Srebf1	Srebf2
G	Syvn1	Tcp1	Tor1a	Ube2g2	Ube2j2	Ubxn4	Ufd1	Uggt1	Uggt2	Usp14	Vcp	Xbp1
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	UPFM076327 3	ENSMUST00000 053766.13	Amfr	ENSMUSG00 000031751	autocrine motility factor receptor Source MGI Symbol Acc MGI 1345634
A02	UPFM075251 7	ENSMUST00000 229828.1	Aff4	ENSMUSG00 000042406	activating transcription factor 4 Source MGI Symbol Acc MGI 88096
A03	UPFM083939 6	ENSMUST00000 027974.6	Aff6	ENSMUSG00 000026663	activating transcription factor 6 Source MGI Symbol Acc MGI 1926157
A04	UPFM087956 2	ENSMUST00000 173984.1	Aff6b	ENSMUSG00 000015461	activating transcription factor 6 beta Source MGI Symbol Acc MGI 105121
A05	UPFM067972 7	ENSMUST00000 160251.7	Atxn3	ENSMUSG00 000021189	ataxin 3 Source MGI Symbol Acc MGI 1099442
A06	UPFM090386 1	ENSMUST00000 211195.1	Bax	ENSMUSG00 000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
A07	UPFM080836 1	ENSMUST00000 003912.6	Calr	ENSMUSG00 000003814	calreticulin Source MGI Symbol Acc MGI 88252
A08	UPFM096906 7	ENSMUST00000 146979.1	Canx	ENSMUSG00 000020368	calnexin Source MGI Symbol Acc MGI 88261
A09	UPFM068436 6	ENSMUST00000 174659.1	Cct4	ENSMUSG00 000007739	chaperonin containing Tcp1, subunit 4 (delta) Source MGI Symbol Acc MGI 104689
A10	UPFM092065 0	ENSMUST00000 205096.1	Cct7	ENSMUSG00 000030007	chaperonin containing Tcp1, subunit 7 (eta) Source MGI Symbol Acc MGI 107184
A11	UPFM117294 0	ENSMUST00000 070642.3	Cebpb	ENSMUSG00 000056501	CCAAT/enhancer binding protein (C/EBP), beta Source MGI Symbol Acc MGI 88373
A12	UPFM069561 9	ENSMUST00000 167751.1	Creb3	ENSMUSG00 000028466	cAMP responsive element binding protein 3 Source MGI Symbol Acc MGI 99946
B01	UPFM080489 3	ENSMUST00000 117422.1	Creb3l3	ENSMUSG00 000035041	cAMP responsive element binding protein 3-like 3 Source MGI Symbol Acc MGI 2384786
B02	UPFM076656 9	ENSMUST00000 026475.14	Ddit3	ENSMUSG00 000025408	DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247
B03	UPFM086012 3	ENSMUST00000 022993.6	Der1	ENSMUSG00 000022365	Der1-like domain family, member 1 Source MGI Symbol Acc MGI 1915069
B04	UPFM101106 7	ENSMUST00000 108523.9	Der12	ENSMUSG00 000018442	Der1-like domain family, member 2 Source MGI Symbol Acc MGI 2151483
B05	UPFM074258 5	ENSMUST00000 188290.6	Dnajb2	ENSMUSG00 000026203	DnaJ heat shock protein family (Hsp40) member B2 Source MGI Symbol Acc MGI 1928739
B06	UPFM069557 0	ENSMUST00000 015049.4	Dnajb9	ENSMUSG00 000014905	DnaJ heat shock protein family (Hsp40) member B9 Source MGI Symbol Acc MGI 1351618
B07	UPFM084671 0	ENSMUST00000 153093.1	Dnajc10	ENSMUSG00 000027006	DnaJ heat shock protein family (Hsp40) member C10 Source MGI Symbol Acc MGI 1914111
B08	UPFM095999 9	ENSMUST00000 022734.8	Dnajc3	ENSMUSG00 000022136	DnaJ heat shock protein family (Hsp40) member C3 Source MGI Symbol Acc MGI 107373
B09	UPFM098743 5	ENSMUST00000 235481.1	Dnajc4	ENSMUSG00 000024963	DnaJ heat shock protein family (Hsp40) member C4 Source MGI Symbol Acc MGI 1927346
B10	UPFM063760 4	ENSMUST00000 203469.1	Edem1	ENSMUSG00 000030104	ER degradation enhancer, mannosidase alpha-like 1 Source MGI Symbol Acc MGI 2180139
B11	UPFM067328 5	ENSMUST00000 059498.11	Edem3	ENSMUSG00 000043019	ER degradation enhancer, mannosidase alpha-like 3 Source MGI Symbol Acc MGI 1914217
B12	UPFM100664 6	ENSMUST00000 029387.14	Eif2a	ENSMUSG00 000027810	eukaryotic translation initiation factor 2A Source MGI Symbol Acc MGI 1098684
C01	UPFM098943 8	ENSMUST00000 159401.1	Eif2ak3	ENSMUSG00 000031668	eukaryotic translation initiation factor 2 alpha kinase 3 Source MGI Symbol Acc MGI 1341830
C02	UPFM067022 2	ENSMUST00000 001059.8	Ern1	ENSMUSG00 000020715	endoplasmic reticulum (ER) to nucleus signalling 1 Source MGI Symbol Acc MGI 1930134
C03	UPFM081117 1	ENSMUST00000 033153.8	Ern2	ENSMUSG00 000030866	endoplasmic reticulum (ER) to nucleus signalling 2 Source MGI Symbol Acc MGI 1349436
C04	UPFM099312 5	ENSMUST00000 022378.8	Ero1l	ENSMUSG00 000021831	ERO1-like (S. cerevisiae) Source MGI Symbol Acc MGI 1354385
C05	UPFM095834 3	ENSMUST00000 221560.1	Ero1lb	ENSMUSG00 000057069	ERO1-like beta (S. cerevisiae) Source MGI Symbol Acc MGI 1914725
C06	UPFM100036 4	ENSMUST00000 030028.4	Erp44	ENSMUSG00 000028343	endoplasmic reticulum protein 44 Source MGI Symbol Acc MGI 1923549
C07	UPFM079215 3	ENSMUST00000 105706.7	Fbxo6	ENSMUSG00 000055401	F-box protein 6 Source MGI Symbol Acc MGI 1354743
C08	UPFM066194 2	ENSMUST00000 096246.4	Ganab	ENSMUSG00 000071650	alpha glucosidase 2 alpha neutral subunit Source MGI Symbol Acc MGI 1097667
C09	UPFM091225 5	ENSMUST00000 154574.7	Ganc	ENSMUSG00 000062646	glucosidase, alpha neutral C Source MGI Symbol Acc MGI 1923301
C10	UPFM069549 0	ENSMUST00000 206575.1	Selenos	ENSMUSG00 000075701	selenoprotein S Source MGI Symbol Acc MGI 95994
	UPFM095065	ENSMUST00000		ENSMUSG00	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	161576.7	Herpud1	000031770	domain member 1 Source MGI Symbol Acc MGI 1927406
C12	UPFM070469 6	ENSMUST00000 007248.4	Hspa11	ENSMUSG00 000007033	heat shock protein 1-like Source MGI Symbol Acc MGI 96231
D01	UPFM100865 4	ENSMUST00000 080449.6	Hspa2	ENSMUSG00 000059970	heat shock protein 2 Source MGI Symbol Acc MGI 96243
D02	UPFM062819 4	ENSMUST00000 020630.7	Hspa4	ENSMUSG00 000020361	heat shock protein 4 Source MGI Symbol Acc MGI 1342292
D03	UPFM085183 7	ENSMUST00000 203353.2	Hspa4l	ENSMUSG00 000025757	heat shock protein 4 like Source MGI Symbol Acc MGI 107422
D04	UPFM100460 3	ENSMUST00000 100171.2	Hspa5	ENSMUSG00 000026864	heat shock protein 5 Source MGI Symbol Acc MGI 95835
D05	UPFM095053 0	ENSMUST00000 169833.1	Hspb9	ENSMUSG00 000017832	heat shock protein, alpha-crystallin-related, B9 Source MGI Symbol Acc MGI 1922732
D06	UPFM076376 6	ENSMUST00000 202089.3	Hsph1	ENSMUSG00 000029657	heat shock 105kDa/110kDa protein 1 Source MGI Symbol Acc MGI 105053
D07	UPFM112646 9	ENSMUST00000 122955.7	Htra2	ENSMUSG00 000068329	HtrA serine peptidase 2 Source MGI Symbol Acc MGI 1928676
D08	UPFM097760 7	ENSMUST00000 176814.2	Htra4	ENSMUSG00 000037406	HtrA serine peptidase 4 Source MGI Symbol Acc MGI 3036260
D09	UPFM084243 1	ENSMUST00000 059155.10	Insig1	ENSMUSG00 000045294	insulin induced gene 1 Source MGI Symbol Acc MGI 1916289
D10	UPFM075291 3	ENSMUST00000 160688.1	Insig2	ENSMUSG00 000003721	insulin induced gene 2 Source MGI Symbol Acc MGI 1920249
D11	UPFM084443 5	ENSMUST00000 160503.3	Manf	ENSMUSG00 000032575	mesencephalic astrocyte-derived neurotrophic factor Source MGI Symbol Acc MGI 1922090
D12	UPFM100007 9	ENSMUST00000 112847.8	Mapk10	ENSMUSG00 000046709	mitogen-activated protein kinase 10 Source MGI Symbol Acc MGI 1346863
E01	UPFM091565 7	ENSMUST00000 111944.9	Mapk8	ENSMUSG00 000021936	mitogen-activated protein kinase 8 Source MGI Symbol Acc MGI 1346861
E02	UPFM094782 8	ENSMUST00000 144857.7	Mapk9	ENSMUSG00 000020366	mitogen-activated protein kinase 9 Source MGI Symbol Acc MGI 1346862
E03	UPFM063522 9	ENSMUST00000 212685.1	Mbtps1	ENSMUSG00 000031835	membrane-bound transcription factor peptidase, site 1 Source MGI Symbol Acc MGI 1927235
E04	UPFM078186 1	ENSMUST00000 179062.7	Mbtps2	ENSMUSG00 000046873	membrane-bound transcription factor peptidase, site 2 Source MGI Symbol Acc MGI 2444506
E05	UPFM075238 6	ENSMUST00000 132519.1	Nplc4	ENSMUSG00 000039703	NPL4 homolog, ubiquitin recognition factor Source MGI Symbol Acc MGI 2679787
E06	UPFM067969 9	ENSMUST00000 210449.1	Nucb1	ENSMUSG00 000030824	nucleobindin 1 Source MGI Symbol Acc MGI 97388
E07	UPFM072020 1	ENSMUST00000 164259.8	Os9	ENSMUSG00 000040462	amplified in osteosarcoma Source MGI Symbol Acc MGI 1924301
E08	UPFM085222 2	ENSMUST00000 028683.13	Pdia3	ENSMUSG00 000027248	protein disulfide isomerase associated 3 Source MGI Symbol Acc MGI 95834
E09	UPFM065907 5	ENSMUST00000 138323.1	Pfdn2	ENSMUSG00 000006412	prefoldin 2 Source MGI Symbol Acc MGI 1276111
E10	UPFM093426 6	ENSMUST00000 165671.7	Pfdn5	ENSMUSG00 000001289	prefoldin 5 Source MGI Symbol Acc MGI 1928753
E11	UPFM100304 2	ENSMUST00000 135789.7	Ppia	ENSMUSG00 000071866	peptidylprolyl isomerase A Source MGI Symbol Acc MGI 97749
E12	UPFM091389 1	ENSMUST00000 052529.3	Ppp1r15b	ENSMUSG00 000046062	protein phosphatase 1, regulatory subunit 15B Source MGI Symbol Acc MGI 2444211
F01	UPFM092732 4	ENSMUST00000 216344.1	Prkcsh	ENSMUSG00 000003402	protein kinase C substrate 80K-H Source MGI Symbol Acc MGI 107877
F02	UPFM062001 3	ENSMUST00000 036904.6	Rnf139	ENSMUSG00 000037075	ring finger protein 139 Source MGI Symbol Acc MGI 1923091
F03	UPFM084963 0	ENSMUST00000 174045.1	Rnf5	ENSMUSG00 000015478	ring finger protein 5 Source MGI Symbol Acc MGI 1860076
F04	UPFM089602 9	ENSMUST00000 032143.7	Rpn1	ENSMUSG00 000030062	ribophorin I Source MGI Symbol Acc MGI 98084
F05	UPFM086373 5	ENSMUST00000 198976.4	Scap	ENSMUSG00 000032485	SREBF chaperone Source MGI Symbol Acc MGI 2135958
F06	UPFM073573 9	ENSMUST00000 191730.1	Sec62	ENSMUSG00 000027706	SEC62 homolog (S. cerevisiae) Source MGI Symbol Acc MGI 1916526
F07	UPFM084212 0	ENSMUST00000 124613.7	Sec63	ENSMUSG00 000019802	SEC63-like (S. cerevisiae) Source MGI Symbol Acc MGI 2155302
F08	UPFM081535 9	ENSMUST00000 171959.1	Sel1l	ENSMUSG00 000020964	sel-1 suppressor of lin-12-like (C. elegans) Source MGI Symbol Acc MGI 1329016
F09	UPFM092893 8	ENSMUST00000 029385.8	Serp1	ENSMUSG00 000027808	stress-associated endoplasmic reticulum protein 1 Source MGI Symbol Acc MGI 92638
F10	UPFM076413 3	ENSMUST00000 237309.1	Sil1	ENSMUSG00 000024357	endoplasmic reticulum chaperone SIL1 homolog (S. cerevisiae) Source MGI Symbol Acc MGI 1932040

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM0631103	ENSMUST00000149238.1	Sreb1	ENSMUSG0000020538	sterol regulatory element binding transcription factor 1 Source MGI Symbol Acc MGI 107606
F12	UPFM0728924	ENSMUST00000230955.1	Sreb2	ENSMUSG0000022463	sterol regulatory element binding factor 2 Source MGI Symbol Acc MGI 107585
G01	UPFM0681122	ENSMUST00000144328.1	Syvn1	ENSMUSG0000024807	synovial apoptosis inhibitor 1, synoviolin Source MGI Symbol Acc MGI 1921376
G02	UPFM0819121	ENSMUST00000138709.1	Tcp1	ENSMUSG0000068039	t-complex protein 1 Source MGI Symbol Acc MGI 98535
G03	UPFM0933287	ENSMUST00000144152.1	Tor1a	ENSMUSG0000026849	torsin family 1, member A (torsin A) Source MGI Symbol Acc MGI 1353568
G04	UPFM0659866	ENSMUST00000173360.1	Ube2g2	ENSMUSG0000009293	ubiquitin-conjugating enzyme E2G 2 Source MGI Symbol Acc MGI 1343188
G05	UPFM0821640	ENSMUST00000166489.7	Ube2j2	ENSMUSG0000023286	ubiquitin-conjugating enzyme E2J 2 Source MGI Symbol Acc MGI 2153608
G06	UPFM0903418	ENSMUST00000027592.5	Ubxn4	ENSMUSG0000026353	UBX domain protein 4 Source MGI Symbol Acc MGI 1915062
G07	UPFM0746115	ENSMUST00000163695.2	Ufd1	ENSMUSG0000005262	ubiquitin recognition factor in ER-associated degradation 1 Source MGI Symbol Acc MGI 109353
G08	UPFM0773922	ENSMUST00000174142.1	Ugg1	ENSMUSG0000037470	UDP-glucose glycoprotein glucosyltransferase 1 Source MGI Symbol Acc MGI 2443162
G09	UPFM0845873	ENSMUST00000148648.7	Ugg1	ENSMUSG0000042104	UDP-glucose glycoprotein glucosyltransferase 2 Source MGI Symbol Acc MGI 1913685
G10	UPFM0946376	ENSMUST00000234165.1	Usp14	ENSMUSG0000047879	ubiquitin specific peptidase 14 Source MGI Symbol Acc MGI 1928898
G11	UPFM0715678	ENSMUST00000030164.7	Vcp	ENSMUSG0000028452	valosin containing protein Source MGI Symbol Acc MGI 99919
G12	UPFM0753799	ENSMUST00000149623.7	Xbp1	ENSMUSG0000020484	X-box binding protein 1 Source MGI Symbol Acc MGI 98970
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	ENSMUST00000026613.13	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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