

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

## Mouse Heat Shock Proteins & Chaperones

Cat. no. 249955 UPMM-076ZA

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	Coq8a	Aif6	Bag1	Bag2	Bag3	Bag4	Bag5	Ccs	Cct2	Cct3	Cct4	Cct5
B	Cct6a	Cct6b	Cct7	Cryaa	Cryab	Dnaja1	Dnaja2	Dnaja3	Dnaja4	Dnajb1	Dnajb11	Dnajb12
C	Dnajb13	Dnajb14	Dnajb2	Dnajb5	Dnajb6	Dnajb7	Dnajb8	Dnajb9	Dnajc1	Dnajc10	Dnajc11	Dnajc12
D	Dnajc13	Dnajc14	Dnajc15	Dnajc16	Dnajc17	Dnajc18	Dnajc19	Dnajc21	Dnajc3	Dnajc4	Dnajc5	Dnajc5b
E	Dnajc5g	Dnajc6	Dnajc7	Dnajc8	Dnajc9	Hsf1	Hsf2	Hsf4	Hsp90aa1	Hspb9	Hsp90b1	Hspa14
F	Hspa1a	Hspa1b	Hspa1l	Hspa2	Hspa4	Hspa4l	Hspa5	Hspa8	Hspa9	Hspb1	Hspb2	Hspb3
G	Hspb6	Hspb7	Hspb8	Hspd1	Hspe1	Hsph1	Pfdn1	Pfdn2	Serpinh1	Sil1	Tcp1	Tor1a
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	UPFM062691 6	ENSMUST00000 161814.7	Coq8a	ENSMUSG00 000026489	coenzyme Q8A Source MGI Symbol Acc MGI 1914676
A02	UPFM083939 6	ENSMUST00000 027974.6	Aff6	ENSMUSG00 000026663	activating transcription factor 6 Source MGI Symbol Acc MGI 1926157
A03	UPFM068185 5	ENSMUST00000 108089.7	Bag1	ENSMUSG00 000028416	BCL2-associated athanogene 1 Source MGI Symbol Acc MGI 108047
A04	UPFM064222 1	ENSMUST00000 044691.8	Bag2	ENSMUSG00 000042215	BCL2-associated athanogene 2 Source MGI Symbol Acc MGI 1891254
A05	UPFM072585 2	ENSMUST00000 033136.8	Bag3	ENSMUSG00 000030847	BCL2-associated athanogene 3 Source MGI Symbol Acc MGI 1352493
A06	UPFM072913 9	ENSMUST00000 038498.9	Bag4	ENSMUSG00 000037316	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A07	UPFM092484 7	ENSMUST00000 054636.6	Bag5	ENSMUSG00 000049792	BCL2-associated athanogene 5 Source MGI Symbol Acc MGI 1917619
A08	UPFM101023 3	ENSMUST00000 238136.1	Ccs	ENSMUSG00 000034108	copper chaperone for superoxide dismutase Source MGI Symbol Acc MGI 1333783
A09	UPFM093667 0	ENSMUST00000 218059.1	Cct2	ENSMUSG00 000034024	chaperonin containing Tcp1, subunit 2 (beta) Source MGI Symbol Acc MGI 107186
A10	UPFM080345 2	ENSMUST00000 163735.1	Cct3	ENSMUSG00 000001416	chaperonin containing Tcp1, subunit 3 (gamma) Source MGI Symbol Acc MGI 104708
A11	UPFM068436 6	ENSMUST00000 174659.1	Cct4	ENSMUSG00 000007739	chaperonin containing Tcp1, subunit 4 (delta) Source MGI Symbol Acc MGI 104689
A12	UPFM062753 1	ENSMUST00000 022842.15	Cct5	ENSMUSG00 000022234	chaperonin containing Tcp1, subunit 5 (epsilon) Source MGI Symbol Acc MGI 107185
B01	UPFM070521 2	ENSMUST00000 031402.11	Cct6a	ENSMUSG00 000029447	chaperonin containing Tcp1, subunit 6a (zeta) Source MGI Symbol Acc MGI 107943
B02	UPFM097269 0	ENSMUST00000 021040.9	Cct6b	ENSMUSG00 000020698	chaperonin containing Tcp1, subunit 6b (zeta) Source MGI Symbol Acc MGI 1329013
B03	UPFM092065 0	ENSMUST00000 205096.1	Cct7	ENSMUSG00 000030007	chaperonin containing Tcp1, subunit 7 (eta) Source MGI Symbol Acc MGI 107184
B04	UPFM077280 0	ENSMUST00000 228305.1	Cryaa	ENSMUSG00 000024041	crystallin, alpha A Source MGI Symbol Acc MGI 88515
B05	UPFM097354 9	ENSMUST00000 214962.1	Cryab	ENSMUSG00 000032060	crystallin, alpha B Source MGI Symbol Acc MGI 88516
B06	UPFM074054 7	ENSMUST00000 148976.1	Dnaja1	ENSMUSG00 000028410	DnaJ heat shock protein family (Hsp40) member A1 Source MGI Symbol Acc MGI 1270129
B07	UPFM087065 2	ENSMUST00000 211630.1	Dnaja2	ENSMUSG00 000031701	DnaJ heat shock protein family (Hsp40) member A2 Source MGI Symbol Acc MGI 1931882
B08	UPFM100361 9	ENSMUST00000 138495.1	Dnaja3	ENSMUSG00 000004069	DnaJ heat shock protein family (Hsp40) member A3 Source MGI Symbol Acc MGI 1933786
B09	UPFM084586 4	ENSMUST00000 120452.7	Dnaja4	ENSMUSG00 000032285	DnaJ heat shock protein family (Hsp40) member A4 Source MGI Symbol Acc MGI 1927638
B10	UPFM089539 1	ENSMUST00000 005620.9	Dnajb1	ENSMUSG00 000005483	DnaJ heat shock protein family (Hsp40) member B1 Source MGI Symbol Acc MGI 1931874
B11	UPFM094095 0	ENSMUST00000 133013.1	Dnajb11	ENSMUSG00 000004460	DnaJ heat shock protein family (Hsp40) member B11 Source MGI Symbol Acc MGI 1915088
B12	UPFM098480 7	ENSMUST00000 146590.7	Dnajb12	ENSMUSG00 000020109	DnaJ heat shock protein family (Hsp40) member B12 Source MGI Symbol Acc MGI 1931881
C01	UPFM093160 6	ENSMUST00000 154516.2	Dnajb13	ENSMUSG00 000030708	DnaJ heat shock protein family (Hsp40) member B13 Source MGI Symbol Acc MGI 1916637
C02	UPFM071647 8	ENSMUST00000 197711.1	Dnajb14	ENSMUSG00 000074212	DnaJ heat shock protein family (Hsp40) member B14 Source MGI Symbol Acc MGI 1917854
C03	UPFM074258 5	ENSMUST00000 188290.6	Dnajb2	ENSMUSG00 000026203	DnaJ heat shock protein family (Hsp40) member B2 Source MGI Symbol Acc MGI 1928739
C04	UPFM097144 7	ENSMUST00000 037872.9	Dnajb5	ENSMUSG00 000036052	DnaJ heat shock protein family (Hsp40) member B5 Source MGI Symbol Acc MGI 1930018
C05	UPFM072006 7	ENSMUST00000 149553.1	Dnajb6	ENSMUSG00 000029131	DnaJ heat shock protein family (Hsp40) member B6 Source MGI Symbol Acc MGI 1344381
C06	UPFM066233 3	ENSMUST00000 057236.4	Dnajb7	ENSMUSG00 000047108	DnaJ heat shock protein family (Hsp40) member B7 Source MGI Symbol Acc MGI 1914012
C07	UPFM099717 7	ENSMUST00000 061866.5	Dnajb8	ENSMUSG00 000048206	DnaJ heat shock protein family (Hsp40) member B8 Source MGI Symbol Acc MGI 1922801
C08	UPFM069557 0	ENSMUST00000 015049.4	Dnajb9	ENSMUSG00 000014905	DnaJ heat shock protein family (Hsp40) member B9 Source MGI Symbol Acc MGI 1351618
C09	UPFM087824 7	ENSMUST00000 163130.7	Dnajc1	ENSMUSG00 000026740	DnaJ heat shock protein family (Hsp40) member C1 Source MGI Symbol Acc MGI 103268
C10	UPFM084671 0	ENSMUST00000 153093.1	Dnajc10	ENSMUSG00 000027006	DnaJ heat shock protein family (Hsp40) member C10 Source MGI Symbol Acc MGI 1914111
	UPFM062019	ENSMUST00000		ENSMUSG00	DnaJ heat shock protein family (Hsp40) member C11 Source MGI Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	9	133959.7	Dnajc11	000039768	MGI 2443386
C12	UPFM072950 8	ENSMUST00000 043317.6	Dnajc12	ENSMUSG00 000036764	DnaJ heat shock protein family (Hsp40) member C12 Source MGI Symbol Acc MGI 1353428
D01	UPFM068430 3	ENSMUST00000 188592.1	Dnajc13	ENSMUSG00 000032560	DnaJ heat shock protein family (Hsp40) member C13 Source MGI Symbol Acc MGI 2676368
D02	UPFM075521 0	ENSMUST00000 219508.1	Dnajc14	ENSMUSG00 000025354	DnaJ heat shock protein family (Hsp40) member C14 Source MGI Symbol Acc MGI 1921580
D03	UPFM084477 4	ENSMUST00000 022590.4	Dnajc15	ENSMUSG00 000022013	DnaJ heat shock protein family (Hsp40) member C15 Source MGI Symbol Acc MGI 1913398
D04	UPFM063273 1	ENSMUST00000 038014.10	Dnajc16	ENSMUSG00 000040697	DnaJ heat shock protein family (Hsp40) member C16 Source MGI Symbol Acc MGI 2442146
D05	UPFM095907 2	ENSMUST00000 038439.3	Dnajc17	ENSMUSG00 000034278	DnaJ heat shock protein family (Hsp40) member C17 Source MGI Symbol Acc MGI 1916658
D06	UPFM078878 4	ENSMUST00000 237995.1	Dnajc18	ENSMUSG00 000024350	DnaJ heat shock protein family (Hsp40) member C18 Source MGI Symbol Acc MGI 1923844
D07	UPFM080350 2	ENSMUST00000 197111.1	Dnajc19	ENSMUSG00 000027679	DnaJ heat shock protein family (Hsp40) member C19 Source MGI Symbol Acc MGI 1914963
D08	UPFM071616 3	ENSMUST00000 136591.7	Dnajc21	ENSMUSG00 000044224	DnaJ heat shock protein family (Hsp40) member C21 Source MGI Symbol Acc MGI 1925371
D09	UPFM095999 9	ENSMUST00000 022734.8	Dnajc3	ENSMUSG00 000022136	DnaJ heat shock protein family (Hsp40) member C3 Source MGI Symbol Acc MGI 107373
D10	UPFM098743 5	ENSMUST00000 235481.1	Dnajc4	ENSMUSG00 000024963	DnaJ heat shock protein family (Hsp40) member C4 Source MGI Symbol Acc MGI 1927346
D11	UPFM080690 5	ENSMUST00000 108796.1	Dnajc5	ENSMUSG00 000000826	DnaJ heat shock protein family (Hsp40) member C5 Source MGI Symbol Acc MGI 892995
D12	UPFM098413 0	ENSMUST00000 118735.7	Dnajc5b	ENSMUSG00 000027606	DnaJ heat shock protein family (Hsp40) member C5 beta Source MGI Symbol Acc MGI 1913576
E01	UPFM097360 5	ENSMUST00000 201740.3	Dnajc5g	ENSMUSG00 000053856	DnaJ heat shock protein family (Hsp40) member C5 gamma Source MGI Symbol Acc MGI 3045263
E02	UPFM081351 5	ENSMUST00000 094953.10	Dnajc6	ENSMUSG00 000028528	DnaJ heat shock protein family (Hsp40) member C6 Source MGI Symbol Acc MGI 1919935
E03	UPFM070813 3	ENSMUST00000 146840.1	Dnajc7	ENSMUSG00 000014195	DnaJ heat shock protein family (Hsp40) member C7 Source MGI Symbol Acc MGI 1928373
E04	UPFM097407 3	ENSMUST00000 105939.9	Dnajc8	ENSMUSG00 000054405	DnaJ heat shock protein family (Hsp40) member C8 Source MGI Symbol Acc MGI 1915848
E05	UPFM079482 2	ENSMUST00000 223889.9	Dnajc9	ENSMUSG00 000021811	DnaJ heat shock protein family (Hsp40) member C9 Source MGI Symbol Acc MGI 1915326
E06	UPFM070667 3	ENSMUST00000 226872.1	Hsf1	ENSMUSG00 000022556	heat shock factor 1 Source MGI Symbol Acc MGI 96238
E07	UPFM075018 0	ENSMUST00000 220353.1	Hsf2	ENSMUSG00 000019878	heat shock factor 2 Source MGI Symbol Acc MGI 96239
E08	UPFM062919 7	ENSMUST00000 036127.8	Hsf4	ENSMUSG00 000033249	heat shock transcription factor 4 Source MGI Symbol Acc MGI 1347058
E09	UPFM099789 5	ENSMUST00000 155242.7	Hsp90aa1	ENSMUSG00 000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
E10	UPFM095053 0	ENSMUST00000 169833.1	Hspb9	ENSMUSG00 000017832	heat shock protein, alpha-crystallin-related, B9 Source MGI Symbol Acc MGI 1922732
E11	UPFM077168 0	ENSMUST00000 129413.1	Hsp90b1	ENSMUSG00 000020048	heat shock protein 90, beta (Grp94), member 1 Source MGI Symbol Acc MGI 98817
E12	UPFM075492 6	ENSMUST00000 135157.1	Hspa14	ENSMUSG00 000109865	heat shock protein 14 Source MGI Symbol Acc MGI 1354164
F01	UPFM092155 3	ENSMUST00000 087328.3	Hspa1a	ENSMUSG00 000091971	heat shock protein 1A Source MGI Symbol Acc MGI 96244
F02	UPFM069277 6	ENSMUST00000 172753.1	Hspa1b	ENSMUSG00 000090877	heat shock protein 1B Source MGI Symbol Acc MGI 99517
F03	UPFM070469 6	ENSMUST00000 007248.4	Hspa1l	ENSMUSG00 000007033	heat shock protein 1-like Source MGI Symbol Acc MGI 96231
F04	UPFM100865 4	ENSMUST00000 080449.6	Hspa2	ENSMUSG00 000059970	heat shock protein 2 Source MGI Symbol Acc MGI 96243
F05	UPFM062819 4	ENSMUST00000 020630.7	Hspa4	ENSMUSG00 000020361	heat shock protein 4 Source MGI Symbol Acc MGI 1342292
F06	UPFM085183 7	ENSMUST00000 203353.2	Hspa4l	ENSMUSG00 000025757	heat shock protein 4 like Source MGI Symbol Acc MGI 107422
F07	UPFM100460 3	ENSMUST00000 100171.2	Hspa5	ENSMUSG00 000026864	heat shock protein 5 Source MGI Symbol Acc MGI 95835
F08	UPFM074399 3	ENSMUST00000 215526.1	Hspa8	ENSMUSG00 000015656	heat shock protein 8 Source MGI Symbol Acc MGI 105384
F09	UPFM079048 3	ENSMUST00000 025217.10	Hspa9	ENSMUSG00 000024359	heat shock protein 9 Source MGI Symbol Acc MGI 96245
F10	UPFM101003 5	ENSMUST00000 005077.6	Hspb1	ENSMUSG00 000004951	heat shock protein 1 Source MGI Symbol Acc MGI 96240

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM0872336	ENSMUST00000042790.4	Hspb2	ENSMUSG0000038086	heat shock protein 2 Source MGI Symbol Acc MGI 1916503
F12	UPFM0897302	ENSMUST00000054650.4	Hspb3	ENSMUSG0000051456	heat shock protein 3 Source MGI Symbol Acc MGI 1928479
G01	UPFM0925274	ENSMUST00000123355.7	Hspb6	ENSMUSG0000036854	heat shock protein, alpha-crystallin-related, B6 Source MGI Symbol Acc MGI 2685325
G02	UPFM0774141	ENSMUST00000102486.4	Hspb7	ENSMUSG0000006221	heat shock protein family, member 7 (cardiovascular) Source MGI Symbol Acc MGI 1352494
G03	UPFM0642186	ENSMUST00000133335.1	Hspb8	ENSMUSG0000041548	heat shock protein 8 Source MGI Symbol Acc MGI 2135756
G04	UPFM0787324	ENSMUST00000144077.2	Hspd1	ENSMUSG0000025980	heat shock protein 1 (chaperonin) Source MGI Symbol Acc MGI 96242
G05	UPFM0856349	ENSMUST00000075242.6	Hspe1	ENSMUSG0000073676	heat shock protein 1 (chaperonin 10) Source MGI Symbol Acc MGI 104680
G06	UPFM0763766	ENSMUST00000202089.3	Hsph1	ENSMUSG0000029657	heat shock 105kDa/110kDa protein 1 Source MGI Symbol Acc MGI 105053
G07	UPFM0742808	ENSMUST00000025204.6	Pfdn1	ENSMUSG0000024346	prefoldin 1 Source MGI Symbol Acc MGI 1914449
G08	UPFM0659075	ENSMUST00000138323.1	Pfdn2	ENSMUSG0000006412	prefoldin 2 Source MGI Symbol Acc MGI 1276111
G09	UPFM1000971	ENSMUST00000208119.1	Serpinh1	ENSMUSG0000070436	serine (or cysteine) peptidase inhibitor, clade H, member 1 Source MGI Symbol Acc MGI 88283
G10	UPFM0764133	ENSMUST00000237309.1	Sil1	ENSMUSG0000024357	endoplasmic reticulum chaperone SIL1 homolog (S. cerevisiae) Source MGI Symbol Acc MGI 1932040
G11	UPFM0819121	ENSMUST00000138709.1	Tcp1	ENSMUSG0000068039	t-complex protein 1 Source MGI Symbol Acc MGI 98535
G12	UPFM0933287	ENSMUST00000144152.1	Tor1a	ENSMUSG0000026849	torsin family 1, member A (torsin A) Source MGI Symbol Acc MGI 1353568
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.

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.

Trademarks: QIAGEN®, LNA®, QuantiNova®, Sample to Insight® (QIAGEN Group); SYBR® (Life Technologies Corp.). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law.

09/2019 © 2019 QIAGEN, all rights reserved.