

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

## Mouse Heat Shock Proteins & Chaperones

Cat. no. 249950 SBMM-076ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System 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	Dnaja1	Dnaja11	Dnaja12
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 PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBM0968285	ENSMUST00000160482.7	Coq8a	ENSMUSG0000026489	coenzyme Q8A Source MGI Symbol Acc MGI 1914676
A02	SBM0817114	ENSMUST00000027974.6	Aff6	ENSMUSG0000026663	activating transcription factor 6 Source MGI Symbol Acc MGI 1926157
A03	SBM0738052	ENSMUST00000030125.4	Bag1	ENSMUSG0000028416	BCL2-associated athanogene 1 Source MGI Symbol Acc MGI 108047
A04	SBM0787410	ENSMUST000000155484.1	Bag2	ENSMUSG0000042215	BCL2-associated athanogene 2 Source MGI Symbol Acc MGI 1891254
A05	SBM0937285	ENSMUST00000033136.8	Bag3	ENSMUSG0000030847	BCL2-associated athanogene 3 Source MGI Symbol Acc MGI 1352493
A06	SBM1036283	ENSMUST000000210103.1	Bag4	ENSMUSG0000037316	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A07	SBM1014451	ENSMUST000000160825.1	Bag5	ENSMUSG0000049792	BCL2-associated athanogene 5 Source MGI Symbol Acc MGI 1917619
A08	SBM0733239	ENSMUST00000037246.6	Ccs	ENSMUSG0000034108	copper chaperone for superoxide dismutase Source MGI Symbol Acc MGI 1333783
A09	SBM0964436	ENSMUST000000219036.1	Cct2	ENSMUSG0000034024	chaperonin containing Tcp1, subunit 2 (beta) Source MGI Symbol Acc MGI 107186
A10	SBM0749494	ENSMUST000000164166.7	Cct3	ENSMUSG0000001416	chaperonin containing Tcp1, subunit 3 (gamma) Source MGI Symbol Acc MGI 104708
A11	SBM0703762	ENSMUST000000173867.7	Cct4	ENSMUSG0000007739	chaperonin containing Tcp1, subunit 4 (delta) Source MGI Symbol Acc MGI 104689
A12	SBM0809914	ENSMUST000000161266.1	Cct5	ENSMUSG0000022234	chaperonin containing Tcp1, subunit 5 (epsilon) Source MGI Symbol Acc MGI 107185
B01	SBM0906940	ENSMUST00000031402.11	Cct6a	ENSMUSG0000029447	chaperonin containing Tcp1, subunit 6a (zeta) Source MGI Symbol Acc MGI 107943
B02	SBM1032045	ENSMUST000000100722.4	Cct6b	ENSMUSG0000020698	chaperonin containing Tcp1, subunit 6b (zeta) Source MGI Symbol Acc MGI 1329013
B03	SBM0777639	ENSMUST000000205096.1	Cct7	ENSMUSG0000030007	chaperonin containing Tcp1, subunit 7 (eta) Source MGI Symbol Acc MGI 107184
B04	SBM1041575	ENSMUST000000019192.7	Cryaa	ENSMUSG0000024041	crystallin, alpha A Source MGI Symbol Acc MGI 88515
B05	SBM1019697	ENSMUST00000034562.8	Cryab	ENSMUSG0000032060	crystallin, alpha B Source MGI Symbol Acc MGI 88516
B06	SBM0967006	ENSMUST000000125442.7	Dnaja1	ENSMUSG0000028410	DnaJ heat shock protein family (Hsp40) member A1 Source MGI Symbol Acc MGI 1270129
B07	SBM1034568	ENSMUST00000034138.6	Dnaja2	ENSMUSG0000031701	DnaJ heat shock protein family (Hsp40) member A2 Source MGI Symbol Acc MGI 1931882
B08	SBM1005864	ENSMUST000000115854.3	Dnaja3	ENSMUSG0000004069	DnaJ heat shock protein family (Hsp40) member A3 Source MGI Symbol Acc MGI 1933786
B09	SBM1064089	ENSMUST000000070070.7	Dnaja4	ENSMUSG0000032285	DnaJ heat shock protein family (Hsp40) member A4 Source MGI Symbol Acc MGI 1927638
B10	SBM0961660	ENSMUST00000005620.9	Dnajb1	ENSMUSG0000005483	DnaJ heat shock protein family (Hsp40) member B1 Source MGI Symbol Acc MGI 1931874
B11	SBM0727604	ENSMUST00000004574.13	Dnajb11	ENSMUSG0000004460	DnaJ heat shock protein family (Hsp40) member B11 Source MGI Symbol Acc MGI 1915088
B12	SBM0856406	ENSMUST00000020309.6	Dnajb12	ENSMUSG0000020109	DnaJ heat shock protein family (Hsp40) member B12 Source MGI Symbol Acc MGI 1931881
C01	SBM0740878	ENSMUST000000154516.2	Dnajb13	ENSMUSG0000030708	DnaJ heat shock protein family (Hsp40) member B13 Source MGI Symbol Acc MGI 1916637
C02	SBM0918076	ENSMUST000000197711.1	Dnajb14	ENSMUSG0000074212	DnaJ heat shock protein family (Hsp40) member B14 Source MGI Symbol Acc MGI 1917854
C03	SBM0708068	ENSMUST000000055223.13	Dnajb2	ENSMUSG0000026203	DnaJ heat shock protein family (Hsp40) member B2 Source MGI Symbol Acc MGI 1928739
C04	SBM1058796	ENSMUST000000107973.2	Dnajb5	ENSMUSG0000036052	DnaJ heat shock protein family (Hsp40) member B5 Source MGI Symbol Acc MGI 1930018
C05	SBM1054782	ENSMUST000000012734.9	Dnajb6	ENSMUSG0000029131	DnaJ heat shock protein family (Hsp40) member B6 Source MGI Symbol Acc MGI 1344381
C06	SBM0737360	ENSMUST000000057236.4	Dnajb7	ENSMUSG0000047108	DnaJ heat shock protein family (Hsp40) member B7 Source MGI Symbol Acc MGI 1914012
C07	SBM1055293	ENSMUST000000203827.1	Dnajb8	ENSMUSG0000048206	DnaJ heat shock protein family (Hsp40) member B8 Source MGI Symbol Acc MGI 1922801
C08	SBM0795008	ENSMUST000000015049.4	Dnajb9	ENSMUSG0000014905	DnaJ heat shock protein family (Hsp40) member B9 Source MGI Symbol Acc MGI 1351618
C09	SBM0726514	ENSMUST000000163130.7	Dnajc1	ENSMUSG0000026740	DnaJ heat shock protein family (Hsp40) member C1 Source MGI Symbol Acc MGI 103268
C10	SBM0965072	ENSMUST000000125000.7	Dnajc10	ENSMUSG0000027006	DnaJ heat shock protein family (Hsp40) member C10 Source MGI Symbol Acc MGI 1914111
		ENSMUST000000		ENSMUSG00	DnaJ heat shock protein family (Hsp40) member C11 Source MGI Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0917670	147625.1	Dnajc11	000039768	MGI 2443386
C12	SBM0853783	ENSMUST00000136832.1	Dnajc12	ENSMUSG0000036764	DnaJ heat shock protein family (Hsp40) member C12 Source MGI Symbol Acc MGI 1353428
D01	SBM0854934	ENSMUST00000186788.6	Dnajc13	ENSMUSG00000032560	DnaJ heat shock protein family (Hsp40) member C13 Source MGI Symbol Acc MGI 2676368
D02	SBM1061480	ENSMUST00000219508.1	Dnajc14	ENSMUSG00000025354	DnaJ heat shock protein family (Hsp40) member C14 Source MGI Symbol Acc MGI 1921580
D03	SBM0759935	ENSMUST00000226459.1	Dnajc15	ENSMUSG00000022013	DnaJ heat shock protein family (Hsp40) member C15 Source MGI Symbol Acc MGI 1913398
D04	SBM0712356	ENSMUST00000153880.1	Dnajc16	ENSMUSG00000040697	DnaJ heat shock protein family (Hsp40) member C16 Source MGI Symbol Acc MGI 2442146
D05	SBM0699425	ENSMUST00000141009.1	Dnajc17	ENSMUSG00000034278	DnaJ heat shock protein family (Hsp40) member C17 Source MGI Symbol Acc MGI 1916658
D06	SBM0734389	ENSMUST00000235930.1	Dnajc18	ENSMUSG00000024350	DnaJ heat shock protein family (Hsp40) member C18 Source MGI Symbol Acc MGI 1923844
D07	SBM0711582	ENSMUST00000108195.9	Dnajc19	ENSMUSG00000027679	DnaJ heat shock protein family (Hsp40) member C19 Source MGI Symbol Acc MGI 1914963
D08	SBM0774152	ENSMUST00000150878.1	Dnajc21	ENSMUSG00000044224	DnaJ heat shock protein family (Hsp40) member C21 Source MGI Symbol Acc MGI 1925371
D09	SBM1063097	ENSMUST00000022734.8	Dnajc3	ENSMUSG00000022136	DnaJ heat shock protein family (Hsp40) member C3 Source MGI Symbol Acc MGI 107373
D10	SBM0875842	ENSMUST00000179118.1	Dnajc4	ENSMUSG00000024963	DnaJ heat shock protein family (Hsp40) member C4 Source MGI Symbol Acc MGI 1927346
D11	SBM0892808	ENSMUST00000152578.7	Dnajc5	ENSMUSG00000000826	DnaJ heat shock protein family (Hsp40) member C5 Source MGI Symbol Acc MGI 892995
D12	SBM0682800	ENSMUST00000118735.7	Dnajc5b	ENSMUSG00000027606	DnaJ heat shock protein family (Hsp40) member C5 beta Source MGI Symbol Acc MGI 1913576
E01	SBM0786265	ENSMUST00000202760.3	Dnajc5g	ENSMUSG00000053856	DnaJ heat shock protein family (Hsp40) member C5 gamma Source MGI Symbol Acc MGI 3045263
E02	SBM0788298	ENSMUST00000149047.7	Dnajc6	ENSMUSG00000028528	DnaJ heat shock protein family (Hsp40) member C6 Source MGI Symbol Acc MGI 1919935
E03	SBM0743783	ENSMUST00000154972.7	Dnajc7	ENSMUSG00000014195	DnaJ heat shock protein family (Hsp40) member C7 Source MGI Symbol Acc MGI 1928373
E04	SBM0746465	ENSMUST00000105940.9	Dnajc8	ENSMUSG00000054405	DnaJ heat shock protein family (Hsp40) member C8 Source MGI Symbol Acc MGI 1915848
E05	SBM0929234	ENSMUST00000223889.1	Dnajc9	ENSMUSG00000021811	DnaJ heat shock protein family (Hsp40) member C9 Source MGI Symbol Acc MGI 1915326
E06	SBM0680334	ENSMUST00000230069.1	Hsf1	ENSMUSG00000022556	heat shock factor 1 Source MGI Symbol Acc MGI 96238
E07	SBM0809729	ENSMUST00000079833.5	Hsf2	ENSMUSG00000019878	heat shock factor 2 Source MGI Symbol Acc MGI 96239
E08	SBM1071249	ENSMUST00000036127.8	Hsf4	ENSMUSG00000033249	heat shock transcription factor 4 Source MGI Symbol Acc MGI 1347058
E09	SBM0939146	ENSMUST00000155242.7	Hsp90aa1	ENSMUSG00000021270	heat shock protein 90, alpha (cytosolic), class A member 1 Source MGI Symbol Acc MGI 96250
E10	SBM0781477	ENSMUST00000169833.1	Hspb9	ENSMUSG00000017832	heat shock protein, alpha-crystallin-related, B9 Source MGI Symbol Acc MGI 1922732
E11	SBM0747618	ENSMUST00000129178.7	Hsp90b1	ENSMUSG00000020048	heat shock protein 90, beta (Grp94), member 1 Source MGI Symbol Acc MGI 98817
E12	SBM1024785	ENSMUST00000135157.1	Hspa14	ENSMUSG0000109865	heat shock protein 14 Source MGI Symbol Acc MGI 1354164
F01	SBM0945329	ENSMUST00000087328.3	Hspa1a	ENSMUSG00000091971	heat shock protein 1A Source MGI Symbol Acc MGI 96244
F02	SBM0949001	ENSMUST00000172753.1	Hspa1b	ENSMUSG00000090877	heat shock protein 1B Source MGI Symbol Acc MGI 99517
F03	SBM0763260	ENSMUST00000007248.4	Hspa1l	ENSMUSG00000007033	heat shock protein 1-like Source MGI Symbol Acc MGI 96231
F04	SBM0946927	ENSMUST00000219555.1	Hspa2	ENSMUSG00000059970	heat shock protein 2 Source MGI Symbol Acc MGI 96243
F05	SBM0909157	ENSMUST00000020630.7	Hspa4	ENSMUSG00000020361	heat shock protein 4 Source MGI Symbol Acc MGI 1342292
F06	SBM0694050	ENSMUST00000203496.2	Hspa4l	ENSMUSG00000025757	heat shock protein 4 like Source MGI Symbol Acc MGI 107422
F07	SBM1001113	ENSMUST00000145466.1	Hspa5	ENSMUSG00000026864	heat shock protein 5 Source MGI Symbol Acc MGI 95835
F08	SBM0678268	ENSMUST00000215526.1	Hspa8	ENSMUSG00000015656	heat shock protein 8 Source MGI Symbol Acc MGI 105384
F09	SBM0858823	ENSMUST00000025217.10	Hspa9	ENSMUSG00000024359	heat shock protein 9 Source MGI Symbol Acc MGI 96245
F10	SBM1021618	ENSMUST00000005077.6	Hspb1	ENSMUSG0000004951	heat shock protein 1 Source MGI Symbol Acc MGI 96240

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0706659	ENSMUST00000042790.4	Hspb2	ENSMUSG0000038086	heat shock protein 2 Source MGI Symbol Acc MGI 1916503
F12	SBM0984939	ENSMUST00000054650.4	Hspb3	ENSMUSG0000051456	heat shock protein 3 Source MGI Symbol Acc MGI 1928479
G01	SBM0699095	ENSMUST00000126989.7	Hspb6	ENSMUSG0000036854	heat shock protein, alpha-crystallin-related, B6 Source MGI Symbol Acc MGI 2685325
G02	SBM1061151	ENSMUST00000102486.4	Hspb7	ENSMUSG0000006221	heat shock protein family, member 7 (cardiovascular) Source MGI Symbol Acc MGI 1352494
G03	SBM0712166	ENSMUST00000036991.4	Hspb8	ENSMUSG0000041548	heat shock protein 8 Source MGI Symbol Acc MGI 2135756
G04	SBM0789113	ENSMUST00000027123.14	Hspd1	ENSMUSG0000025980	heat shock protein 1 (chaperonin) Source MGI Symbol Acc MGI 96242
G05	SBM0877393	ENSMUST00000134628.1	Hspe1	ENSMUSG0000073676	heat shock protein 1 (chaperonin 10) Source MGI Symbol Acc MGI 104680
G06	SBM0936477	ENSMUST00000200805.3	Hsph1	ENSMUSG0000029657	heat shock 105kDa/110kDa protein 1 Source MGI Symbol Acc MGI 105053
G07	SBM0951179	ENSMUST00000237499.1	Pfdn1	ENSMUSG0000024346	prefoldin 1 Source MGI Symbol Acc MGI 1914449
G08	SBM0803955	ENSMUST00000135941.7	Pfdn2	ENSMUSG0000006412	prefoldin 2 Source MGI Symbol Acc MGI 1276111
G09	SBM0790738	ENSMUST00000169437.8	Serpinh1	ENSMUSG0000070436	serine (or cysteine) peptidase inhibitor, clade H, member 1 Source MGI Symbol Acc MGI 88283
G10	SBM0927921	ENSMUST00000235619.1	Sil1	ENSMUSG0000024357	endoplasmic reticulum chaperone SIL1 homolog (S. cerevisiae) Source MGI Symbol Acc MGI 1932040
G11	SBM0884405	ENSMUST00000151715.1	Tcp1	ENSMUSG0000068039	t-complex protein 1 Source MGI Symbol Acc MGI 98535
G12	SBM1020953	ENSMUST00000123762.1	Tor1a	ENSMUSG0000026849	torsin family 1, member A (torsin A) Source MGI Symbol Acc MGI 1353568
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	SBM1218554	Sybr_MGDC	MGDC	Sybr_MGDC	Mouse Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
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 SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green 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	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208052

\*Larger kit sizes available.

The QuantiNova LNA 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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