

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

## Rat Heat Shock Proteins & Chaperones

Cat. no. 249950 SBRN-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	Aif6	Bag1	Bag3	Bag4	Bag5	Coq8a	Ccs	Cct2	Cct3	Cct4	Cct5	Cct6a
B	Cct7	Cct8	Cryaa	Cryab	Dnaja1	Dnaja2	Dnaja3	Dnaja4	Dnajb1	Dnajb11	Dnajb12	Dnajb13
C	Dnajb4	Dnajb5	Dnajb6	Dnajb8	Dnajb9	Dnajc1	Dnajc10	Dnajc11	Dnajc13	Dnajc14	Dnajc15	Dnajc16
D	Dnajc17	Dnajc18	Dnajc2	Dnajc21	Dnajc22	Dnajc3	Dnajc4	Dnajc5	Dnajc5b	Dnajc5g	Dnajc6	Dnajc7
E	Dnajc8	Dnajc9	Tor1a	Hsf1	Hsf2	Hsf4	Hsp90aa1	Hsp90ab1	Hsp90b1	Hspa12a	Hspa12b	Hspa13
F	Hspa14	Hspa1a	Hspa11	Hspa2	Hspa4	Hspa4l	Hspa5	Hspa9	Hspb1	Hspb2	Hspb3	Hspb6
G	Hspb7	Hspb8	Hspb9	Hspd1	Hspe1	Hsph1	Pfdn1	Pfdn5	Pfdn6	Serpinh1	Sil1	Tcp1
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBR1113797	ENSRNOT00000029202.5	Atf6	ENSRNOG0000024632	activating transcription factor 6 Source RGD Symbol Acc 1305471
A02	SBR1157338	ENSRNOT00000011455.6	Bag1	ENSRNOG0000008277	Bcl2 associated athanogene 1 Source RGD Symbol Acc 1305203
A03	SBR1204128	ENSRNOT00000027616.6	Bag3	ENSRNOG0000020298	Bcl2-associated athanogene 3 Source RGD Symbol Acc 1307794
A04	SBR1199175	ENSRNOT00000066901.3	Bag4	ENSRNOG0000042560	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A05	SBR1150207	ENSRNOT00000085594.1	Bag5	ENSRNOG0000058841	BCL2-associated athanogene 5-like 1 Source RGD Symbol Acc 9457021
A06	SBR1110156	ENSRNOT00000030135.4	Coq8a	ENSRNOG0000043201	coenzyme Q8A Source RGD Symbol Acc 1308245
A07	SBR1140988	ENSRNOT00000073983.2	Ccs	ENSRNOG0000047816	copper chaperone for superoxide dismutase Source RGD Symbol Acc 620403
A08	SBR1209040	ENSRNOT00000037946.5	Cct2	ENSRNOG0000021317	chaperonin containing TCP1 subunit 2 Source RGD Symbol Acc 1359143
A09	SBR1184000	ENSRNOT00000025824.6	Cct3	ENSRNOG0000019090	chaperonin containing TCP1 subunit 3 Source RGD Symbol Acc 735038
A10	SBR1140872	ENSRNOT00000012847.3	Cct4	ENSRNOG0000009642	chaperonin containing TCP1 subunit 4 Source RGD Symbol Acc 727937
A11	SBR1200760	ENSRNOT00000015886.6	Cct5	ENSRNOG0000011632	chaperonin containing TCP1 subunit 5 Source RGD Symbol Acc 735161
A12	SBR1102927	ENSRNOT00000001227.7	Cct6a	ENSRNOG0000000923	chaperonin containing TCP1 subunit 6A Source RGD Symbol Acc 1304763
B01	SBR1102671	ENSRNOT00000021030.5	Cct7	ENSRNOG0000015630	chaperonin containing TCP1 subunit 7 Source RGD Symbol Acc 1306422
B02	SBR1145335	ENSRNOT00000002169.6	Cct8	ENSRNOG0000001592	chaperonin containing TCP1 subunit 8 Source RGD Symbol Acc 1305452
B03	SBR1130295	ENSRNOT00000075545.3	Cryaa	ENSRNOG0000047175	crystallin, alpha A Source RGD Symbol Acc 2413
B04	SBR1151967	ENSRNOT00000059127.3	Cryab	ENSRNOG0000010524	crystallin, alpha B Source RGD Symbol Acc 2414
B05	SBR1110081	ENSRNOT00000010061.3	Dnaja1	ENSRNOG0000007029	DnaJ heat shock protein family (Hsp40) member A1 Source RGD Symbol Acc 620942
B06	SBR1137505	ENSRNOT00000022573.5	Dnaja2	ENSRNOG0000016251	DnaJ heat shock protein family (Hsp40) member A2 Source RGD Symbol Acc 71001
B07	SBR1146904	ENSRNOT00000081596.1	Dnaja3	ENSRNOG0000003855	DnaJ heat shock protein family (Hsp40) member A3 Source RGD Symbol Acc 1306527
B08	SBR1195653	ENSRNOT00000017053.4	Dnaja4	ENSRNOG0000012106	DnaJ heat shock protein family (Hsp40) member A4 Source RGD Symbol Acc 1310035
B09	SBR1139977	ENSRNOT00000038879.5	Dnajb1	ENSRNOG0000021824	DnaJ heat shock protein family (Hsp40) member B1 Source RGD Symbol Acc 1304725
B10	SBR1179467	ENSRNOT00000002462.6	Dnajb11	ENSRNOG0000001803	DnaJ heat shock protein family (Hsp40) member B11 Source RGD Symbol Acc 1307373
B11	SBR1126205	ENSRNOT00000044805.3	Dnajb12	ENSRNOG0000030408	DnaJ heat shock protein family (Hsp40) member B12 Source RGD Symbol Acc 1359677
B12	SBR1146035	ENSRNOT00000024256.5	Dnajb13	ENSRNOG0000017975	DnaJ heat shock protein family (Hsp40) member B13 Source RGD Symbol Acc 1359131
C01	SBR1129220	ENSRNOT00000017381.6	Dnajb4	ENSRNOG0000013011	DnaJ heat shock protein family (Hsp40) member B4 Source RGD Symbol Acc 1305826
C02	SBR1129655	ENSRNOT00000080082.1	Dnajb5	ENSRNOG0000000130	DnaJ heat shock protein family (Hsp40) member B5 Source RGD Symbol Acc 1307453
C03	SBR1107753	ENSRNOT00000035996.3	Dnajb6	ENSRNOG0000010353	DnaJ heat shock protein family (Hsp40) member B6 Source RGD Symbol Acc 1308207
C04	SBR1120723	ENSRNOT00000050584.4	Dnajb8	ENSRNOG0000034088	DnaJ heat shock protein family (Hsp40) member B8 Source RGD Symbol Acc 1561981
C05	SBR1109895	ENSRNOT00000005363.5	Dnajb9	ENSRNOG0000004006	DnaJ heat shock protein family (Hsp40) member B9 Source RGD Symbol Acc 3070
C06	SBR1196421	ENSRNOT00000000162.7	Dnajc1	ENSRNOG0000000150	DnaJ heat shock protein family (Hsp40) member C1 Source RGD Symbol Acc 2322144
C07	SBR1197872	ENSRNOT00000009839.4	Dnajc10	ENSRNOG0000006803	DnaJ heat shock protein family (Hsp40) member C10 Source RGD Symbol Acc 1307813
C08	SBR1147766	ENSRNOT00000011960.6	Dnajc11	ENSRNOG0000008802	DnaJ heat shock protein family (Hsp40) member C11 Source RGD Symbol Acc 1307731
C09	SBR1133244	ENSRNOT00000015344.7	Dnajc13	ENSRNOG0000011491	DnaJ heat shock protein family (Hsp40) member C13 Source RGD Symbol Acc 1308046
C10	SBR1177137	ENSRNOT00000037332.3	Dnajc14	ENSRNOG0000006844	DnaJ heat shock protein family (Hsp40) member C14 Source RGD Symbol Acc 620489
		ENSRNOT000000		ENSRNOG00	DnaJ heat shock protein family (Hsp40) member C15 Source RGD Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1132260	012530.5	Dnajc15	000009063	1307154
C12	SBR1137487	ENSRNOT00000017247.4	Dnajc16	ENSRNOG0000012503	DnaJ heat shock protein family (Hsp40) member C16 Source RGD Symbol Acc 1359395
D01	SBR1181869	ENSRNOT00000016692.7	Dnajc17	ENSRNOG0000012368	DnaJ heat shock protein family (Hsp40) member C17 Source RGD Symbol Acc 1308015
D02	SBR1111201	ENSRNOT00000027194.6	Dnajc18	ENSRNOG0000019995	DnaJ heat shock protein family (Hsp40) member C18 Source RGD Symbol Acc 1310237
D03	SBR1148128	ENSRNOT00000016909.7	Dnajc2	ENSRNOG0000012392	DnaJ heat shock protein family (Hsp40) member C2 Source RGD Symbol Acc 620524
D04	SBR1152396	ENSRNOT00000024218.6	Dnajc21	ENSRNOG0000017876	DnaJ heat shock protein family (Hsp40) member C21 Source RGD Symbol Acc 621729
D05	SBR1122638	ENSRNOT00000087932.1	Dnajc22	ENSRNOG0000053498	DnaJ heat shock protein family (Hsp40) member C22 Source RGD Symbol Acc 1311098
D06	SBR1201517	ENSRNOT00000093411.1	Dnajc3	ENSRNOG0000010352	DnaJ heat shock protein family (Hsp40) member C3 Source RGD Symbol Acc 708518
D07	SBR1192355	ENSRNOT00000087285.1	Dnajc4	ENSRNOG0000043060	DnaJ heat shock protein family (Hsp40) member C4 Source RGD Symbol Acc 1308693
D08	SBR1174689	ENSRNOT00000020581.3	Dnajc5	ENSRNOG0000015202	DnaJ heat shock protein family (Hsp40) member C5 Source RGD Symbol Acc 620516
D09	SBR1098051	ENSRNOT00000017387.5	Dnajc5b	ENSRNOG0000012851	DnaJ heat shock protein family (Hsp40) member C5 beta Source RGD Symbol Acc 1562486
D10	SBR1104335	ENSRNOT00000031244.5	Dnajc5g	ENSRNOG0000026578	DnaJ heat shock protein family (Hsp40) member C5 gamma Source RGD Symbol Acc 1307426
D11	SBR1107699	ENSRNOT00000086539.1	Dnajc6	ENSRNOG0000052887	DnaJ heat shock protein family (Hsp40) member C6 Source RGD Symbol Acc 1309900
D12	SBR1183448	ENSRNOT00000024321.6	Dnajc7	ENSRNOG0000017781	DnaJ heat shock protein family (Hsp40) member C7 Source RGD Symbol Acc 1303226
E01	SBR1212754	ENSRNOT00000017740.6	Dnajc8	ENSRNOG0000013255	DnaJ heat shock protein family (Hsp40) member C8 Source RGD Symbol Acc 1306024
E02	SBR1186289	ENSRNOT00000009009.5	Dnajc9	ENSRNOG0000006619	DnaJ heat shock protein family (Hsp40) member C9 Source RGD Symbol Acc 1305009
E03	SBR1205998	ENSRNOT00000064660.3	Tor1a	ENSRNOG0000006894	torsin family 1, member A Source RGD Symbol Acc 628863
E04	SBR1218531	ENSRNOT00000050108.3	Hsf1	ENSRNOG0000021732	heat shock transcription factor 1 Source RGD Symbol Acc 620913
E05	SBR1197745	ENSRNOT00000001059.4	Hsf2	ENSRNOG0000008080	heat shock transcription factor 2 Source RGD Symbol Acc 68395
E06	SBR1133919	ENSRNOT00000075933.2	Hsf4	ENSRNOG0000015253	heat shock transcription factor 4 Source RGD Symbol Acc 1310808
E07	SBR1113341	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
E08	SBR1225380	ENSRNOT00000026920.6	Hsp90ab1	ENSRNOG0000019834	heat shock protein 90 alpha family class B member 1 Source RGD Symbol Acc 1303075
E09	SBR1196985	ENSRNOT00000079731.1	Hsp90b1	ENSRNOG0000026963	heat shock protein 90 beta family member 1 Source RGD Symbol Acc 1310482
E10	SBR1187673	ENSRNOT00000024548.5	Hspa12a	ENSRNOG0000018019	heat shock protein family A (Hsp70) member 12A Source RGD Symbol Acc 1305531
E11	SBR1095532	ENSRNOT00000028856.7	Hspa12b	ENSRNOG0000021244	heat shock protein family A (Hsp70) member 12B Source RGD Symbol Acc 1312004
E12	SBR1145920	ENSRNOT00000091864.1	Hspa13	ENSRNOG0000060979	heat shock protein family A (Hsp70) member 13 Source RGD Symbol Acc 3775
F01	SBR1126842	ENSRNOT00000020854.5	Hspa14	ENSRNOG0000015212	heat shock protein family A, member 14 Source RGD Symbol Acc 1303296
F02	SBR1189015	ENSRNOT00000081924.1	Hspa1a	ENSRNOG0000050647	heat shock protein family A (Hsp70) member 1B Source RGD Symbol Acc 2840
F03	SBR1207127	ENSRNOT00000074223.2	Hspa1l	ENSRNOG0000047966	heat shock protein family A (Hsp70) member 1 like Source RGD Symbol Acc 1595925
F04	SBR1199480	ENSRNOT00000008504.5	Hspa2	ENSRNOG0000006472	heat shock protein family A member 2 Source RGD Symbol Acc 620664
F05	SBR1138708	ENSRNOT00000023628.3	Hspa4	ENSRNOG0000016596	heat shock protein family A member 4 Source RGD Symbol Acc 628878
F06	SBR1146380	ENSRNOT00000015474.6	Hspa4l	ENSRNOG0000010819	heat shock protein family A (Hsp70) member 4 like Source RGD Symbol Acc 1306528
F07	SBR1166340	ENSRNOT00000025067.6	Hspa5	ENSRNOG0000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
F08	SBR1135337	ENSRNOT00000026696.6	Hspa9	ENSRNOG0000019525	heat shock protein family A member 9 Source RGD Symbol Acc 1311806
F09	SBR1195680	ENSRNOT00000031555.5	Hspb1	ENSRNOG0000023546	heat shock protein family B (small) member 1 Source RGD Symbol Acc 61306
F10	SBR1181093	ENSRNOT00000013960.2	Hspb2	ENSRNOG0000010402	heat shock protein family B (small) member 2 Source RGD Symbol Acc 70914

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1187327	ENSRNOT00000014627.3	Hspb3	ENSRNOG0000010992	heat shock protein family B (small) member 3 Source RGD Symbol Acc 68345
F12	SBR1212714	ENSRNOT00000028401.4	Hspb6	ENSRNOG0000020922	heat shock protein family B (small) member 6 Source RGD Symbol Acc 621554
G01	SBR1162181	ENSRNOT00000051317.3	Hspb7	ENSRNOG0000029079	heat shock protein family B (small) member 7 Source RGD Symbol Acc 62021
G02	SBR1153803	ENSRNOT00000039275.3	Hspb8	ENSRNOG0000022392	heat shock protein family B (small) member 8 Source RGD Symbol Acc 71003
G03	SBR1095370	ENSRNOT00000055248.2	Hspb9	ENSRNOG0000036819	heat shock protein family B (small) member 9 Source RGD Symbol Acc 1309122
G04	SBR1128872	ENSRNOT00000066589.2	Hspd1	ENSRNOG0000014525	heat shock protein family D member 1 Source RGD Symbol Acc 621314
G05	SBR1196587	ENSRNOT00000082300.1	Hspe1	ENSRNOG0000051624	heat shock protein family E member 1 Source RGD Symbol Acc 2844
G06	SBR1096780	ENSRNOT00000001201.7	Hsph1	ENSRNOG000000902	heat shock protein family H (Hsp110) member 1 Source RGD Symbol Acc 1311609
G07	SBR1118103	ENSRNOT00000025353.5	Pfdn1	ENSRNOG0000018653	prefoldin subunit 1 Source RGD Symbol Acc 1305603
G08	SBR1186908	ENSRNOT00000017794.5	Pfdn5	ENSRNOG0000012985	prefoldin subunit 5 Source RGD Symbol Acc 1311436
G09	SBR1111422	ENSRNOT00000092676.1	Pfdn6	ENSRNOG0000000473	prefoldin subunit 6 Source RGD Symbol Acc 1303006
G10	SBR1138731	ENSRNOT00000022983.6	Serpinh1	ENSRNOG0000016831	serpin family H member 1 Source RGD Symbol Acc 69302
G11	SBR1127515	ENSRNOT00000026895.5	Sil1	ENSRNOG0000019826	SIL1 nucleotide exchange factor Source RGD Symbol Acc 735103
G12	SBR1154694	ENSRNOT00000019531.4	Tcp1	ENSRNOG0000014160	t-complex 1 Source RGD Symbol Acc 3832
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	SBR1218555	Sybr_RGDC	RGDC	Sybr_RGDC	Rat 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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