

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

## Human Cellular Stress Responses

Cat. no. 249950 SBHS-019ZA

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	ACADSB	BAG1	CALR	CANX	CAT	CCT2	CCT3	CCT4	CCT5	CCT7	CCT8	CES1
B	CLU	CRYAA	CRYAB	CYP11A1	CYP11B2	CYP17A1	CYP1A1	CYP1A2	CYP1B1	CYP2C19	CYP2C9	CYP2D6
C	CYP2E1	CYP2F1	CYP3A4	CYP4A11	CYP4B1	CYP7A1	CYP7B1	DNAJA1	DNAJA2	DNAJA3	DNAJA4	DNAJB1
D	DNAJB11	DNAJB12	DNAJB2	DNAJB4	DNAJB5	DNAJB6	DNAJB9	DNAJC1	DNAJC4	DNAJC5	DNAJC6	DNAJC7
E	DNAJC8	DNAJC9	EPHX2	FMO1	FMO4	FMO5	GPX1	GPX2	GSR	GSTA1	GSTA5	GSTM5
F	HMOX1	HMOX2	HOPX	HSPA12A	HSPA1A	HSPA1L	HSPA2	HSPA4	HSPA5	HSPA8	HSPA9	HSPB1
G	HSPB2	HSPB3	HSPD1	HSPF1	PPID	SERPINH1	SOD1	SOD2	SOD3	ST13	TCP1	XDH
H	ACTB	B2M	GAPDH	HRPT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH0233602	ENST00000358776.6	ACADSB	ENSG00000196177	acyl-CoA dehydrogenase short/branched chain Source HGNC Symbol Acc HGNC 91
A02	SBH1219779	ENST00000379704.7	BAG1	ENSG00000107262	BCL2 associated athanogene 1 Source HGNC Symbol Acc HGNC 937
A03	SBH0031560	ENST00000316448.9	CALR	ENSG00000179218	calreticulin Source HGNC Symbol Acc HGNC 1455
A04	SBH0265983	ENST00000502673.5	CANX	ENSG00000127022	calnexin Source HGNC Symbol Acc HGNC 1473
A05	SBH1219829	ENST00000648322.1	CAT	ENSG00000121691	catalase Source HGNC Symbol Acc HGNC 1516
A06	SBH0487388	ENST00000546859.5	CCT2	ENSG00000166226	chaperonin containing TCP1 subunit 2 Source HGNC Symbol Acc HGNC 1615
A07	SBH0648709	ENST00000368262.7	CCT3	ENSG00000163468	chaperonin containing TCP1 subunit 3 Source HGNC Symbol Acc HGNC 1616
A08	SBH0656118	ENST00000394440.8	CCT4	ENSG00000115484	chaperonin containing TCP1 subunit 4 Source HGNC Symbol Acc HGNC 1617
A09	SBH0482048	ENST00000625723.1	CCT5	ENSG00000150753	chaperonin containing TCP1 subunit 5 Source HGNC Symbol Acc HGNC 1618
A10	SBH0058753	ENST00000626868.1	CCT7	ENSG00000135624	chaperonin containing TCP1 subunit 7 Source HGNC Symbol Acc HGNC 1622
A11	SBH0563576	ENST00000432178.5	CCT8	ENSG00000156261	chaperonin containing TCP1 subunit 8 Source HGNC Symbol Acc HGNC 1623
A12	SBH0174091	ENST00000566555.1	CES1	ENSG00000198848	carboxylesterase 1 Source HGNC Symbol Acc HGNC 1863
B01	SBH0298251	ENST00000523500.5	CLU	ENSG00000120885	clusterin Source HGNC Symbol Acc HGNC 2095
B02	SBH0471707	ENST00000398133.5	CRYAA	ENSG00000160202	crystallin alpha A Source HGNC Symbol Acc HGNC 2388
B03	SBH0502900	ENST00000531198.5	CRYAB	ENSG00000109846	crystallin alpha B Source HGNC Symbol Acc HGNC 2389
B04	SBH0521137	ENST00000450547.1	CYP11A1	ENSG00000140459	cytochrome P450 family 11 subfamily A member 1 Source HGNC Symbol Acc HGNC 2590
B05	SBH0529415	ENST00000323110.2	CYP11B2	ENSG00000179142	cytochrome P450 family 11 subfamily B member 2 Source HGNC Symbol Acc HGNC 2592
B06	SBH0449399	ENST00000369887.4	CYP17A1	ENSG00000148795	cytochrome P450 family 17 subfamily A member 1 Source HGNC Symbol Acc HGNC 2593
B07	SBH0255774	ENST00000566503.1	CYP1A1	ENSG00000140465	cytochrome P450 family 1 subfamily A member 1 Source HGNC Symbol Acc HGNC 2595
B08	SBH0642290	ENST00000343932.5	CYP1A2	ENSG00000140505	cytochrome P450 family 1 subfamily A member 2 Source HGNC Symbol Acc HGNC 2596
B09	SBH0230648	ENST00000494864.1	CYP1B1	ENSG00000138061	cytochrome P450 family 1 subfamily B member 1 Source HGNC Symbol Acc HGNC 2597
B10	SBH0134172	ENST00000480405.2	CYP2C19	ENSG00000165841	cytochrome P450 family 2 subfamily C member 19 Source HGNC Symbol Acc HGNC 2621
B11	SBH0147429	ENST00000643112.1	CYP2C9	ENSG00000138109	cytochrome P450 family 2 subfamily C member 9 Source HGNC Symbol Acc HGNC 2623
B12	SBH0262798	ENST00000359033.4	CYP2D6	ENSG00000100197	cytochrome P450 family 2 subfamily D member 6 Source HGNC Symbol Acc HGNC 2625
C01	SBH0164427	ENST00000418356.1	CYP2E1	ENSG00000130649	cytochrome P450 family 2 subfamily E member 1 Source HGNC Symbol Acc HGNC 2631
C02	SBH0046077	ENST00000532164.2	CYP2F1	ENSG00000197446	cytochrome P450 family 2 subfamily F member 1 Source HGNC Symbol Acc HGNC 2632
C03	SBH0592580	ENST00000652018.1	CYP3A4	ENSG00000160868	cytochrome P450 family 3 subfamily A member 4 Source HGNC Symbol Acc HGNC 2637
C04	SBH0004621	ENST00000462347.5	CYP4A11	ENSG00000187048	cytochrome P450 family 4 subfamily A member 11 Source HGNC Symbol Acc HGNC 2642
C05	SBH0121262	ENST00000640628.1	CYP4B1	ENSG00000142973	cytochrome P450 family 4 subfamily B member 1 Source HGNC Symbol Acc HGNC 2644
C06	SBH0038066	ENST00000301645.4	CYP7A1	ENSG00000167910	cytochrome P450 family 7 subfamily A member 1 Source HGNC Symbol Acc HGNC 2651
C07	SBH0455426	ENST00000523954.1	CYP7B1	ENSG00000172817	cytochrome P450 family 7 subfamily B member 1 Source HGNC Symbol Acc HGNC 2652
C08	SBH0127774	ENST00000330899.5	DNAJA1	ENSG00000108606	DnaJ heat shock protein family (Hsp40) member A1 Source HGNC Symbol Acc HGNC 5229
C09	SBH0584615	ENST00000317089.10	DNAJA2	ENSG000001069345	DnaJ heat shock protein family (Hsp40) member A2 Source HGNC Symbol Acc HGNC 14884
C10	SBH0294009	ENST00000575106.5	DNAJA3	ENSG00000103423	DnaJ heat shock protein family (Hsp40) member A3 Source HGNC Symbol Acc HGNC 11808
		ENST00000394		ENSG000000	DnaJ heat shock protein family (Hsp40) member A4 Source HGNC Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0111208	852.7	DNAJA4	140403	HGNC 14885
C12	SBH0562621	ENST00000595992.5	DNAJB1	ENSG00000132002	DnaJ heat shock protein family (Hsp40) member B1 Source HGNC Symbol Acc HGNC 5270
D01	SBH0561581	ENST00000265028.7	DNAJB11	ENSG00000090520	DnaJ heat shock protein family (Hsp40) member B11 Source HGNC Symbol Acc HGNC 14889
D02	SBH0201898	ENST00000461919.5	DNAJB12	ENSG00000148719	DnaJ heat shock protein family (Hsp40) member B12 Source HGNC Symbol Acc HGNC 14891
D03	SBH0647336	ENST00000463463.5	DNAJB2	ENSG00000135924	DnaJ heat shock protein family (Hsp40) member B2 Source HGNC Symbol Acc HGNC 5228
D04	SBH0046830	ENST00000476396.1	DNAJB4	ENSG00000162616	DnaJ heat shock protein family (Hsp40) member B4 Source HGNC Symbol Acc HGNC 14886
D05	SBH0582835	ENST00000545841.5	DNAJB5	ENSG00000137094	DnaJ heat shock protein family (Hsp40) member B5 Source HGNC Symbol Acc HGNC 14887
D06	SBH0009112	ENST00000429029.6	DNAJB6	ENSG00000105993	DnaJ heat shock protein family (Hsp40) member B6 Source HGNC Symbol Acc HGNC 14888
D07	SBH0454356	ENST00000249356.4	DNAJB9	ENSG00000128590	DnaJ heat shock protein family (Hsp40) member B9 Source HGNC Symbol Acc HGNC 6968
D08	SBH0659457	ENST00000447548.5	DNAJC1	ENSG00000136770	DnaJ heat shock protein family (Hsp40) member C1 Source HGNC Symbol Acc HGNC 20090
D09	SBH0605021	ENST00000355040.8	DNAJC4	ENSG00000110011	DnaJ heat shock protein family (Hsp40) member C4 Source HGNC Symbol Acc HGNC 5271
D10	SBH0270601	ENST00000360864.9	DNAJC5	ENSG00000101152	DnaJ heat shock protein family (Hsp40) member C5 Source HGNC Symbol Acc HGNC 16235
D11	SBH0266599	ENST00000395325.7	DNAJC6	ENSG00000116675	DnaJ heat shock protein family (Hsp40) member C6 Source HGNC Symbol Acc HGNC 15469
D12	SBH0261156	ENST00000588641.5	DNAJC7	ENSG00000168259	DnaJ heat shock protein family (Hsp40) member C7 Source HGNC Symbol Acc HGNC 12392
E01	SBH0310005	ENST00000489277.5	DNAJC8	ENSG00000126698	DnaJ heat shock protein family (Hsp40) member C8 Source HGNC Symbol Acc HGNC 15470
E02	SBH0450749	ENST00000469143.1	DNAJC9	ENSG00000213551	DnaJ heat shock protein family (Hsp40) member C9 Source HGNC Symbol Acc HGNC 19123
E03	SBH0538671	ENST00000521400.5	EPHX2	ENSG00000120915	epoxide hydrolase 2 Source HGNC Symbol Acc HGNC 3402
E04	SBH0628645	ENST00000354841.4	FMO1	ENSG00000010932	flavin containing monooxygenase 1 Source HGNC Symbol Acc HGNC 3769
E05	SBH0261769	ENST00000497228.5	FMO4	ENSG00000076258	flavin containing monooxygenase 4 Source HGNC Symbol Acc HGNC 3772
E06	SBH0434366	ENST00000619062.1	FMO5	ENSG00000131781	flavin containing monooxygenase 5 Source HGNC Symbol Acc HGNC 3773
E07	SBH1220032	ENST00000620890.1	GPX1	ENSG00000233276	glutathione peroxidase 1 Source HGNC Symbol Acc HGNC 4553
E08	SBH1220033	ENST00000612794.1	GPX2	ENSG00000176153	glutathione peroxidase 2 Source HGNC Symbol Acc HGNC 4554
E09	SBH1220042	ENST00000546342.5	GSR	ENSG00000104687	glutathione-disulfide reductase Source HGNC Symbol Acc HGNC 4623
E10	SBH0553573	ENST00000476213.1	GSTA1	ENSG00000243955	glutathione S-transferase alpha 1 Source HGNC Symbol Acc HGNC 4626
E11	SBH0441013	ENST00000284562.6	GSTA5	ENSG00000182793	glutathione S-transferase alpha 5 Source HGNC Symbol Acc HGNC 19662
E12	SBH0426044	ENST00000256593.8	GSTM5	ENSG00000134201	glutathione S-transferase mu 5 Source HGNC Symbol Acc HGNC 4637
F01	SBH1220067	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
F02	SBH0248684	ENST00000414777.5	HMOX2	ENSG00000103415	heme oxygenase 2 Source HGNC Symbol Acc HGNC 5014
F03	SBH0511631	ENST00000508121.2	HOPX	ENSG00000171476	HOP homeobox Source HGNC Symbol Acc HGNC 24961
F04	SBH0645482	ENST00000468935.2	HSPA12A	ENSG00000165868	heat shock protein family A (Hsp70) member 12A Source HGNC Symbol Acc HGNC 19022
F05	SBH0315359	ENST00000375651.6	HSPA1A	ENSG00000204389	heat shock protein family A (Hsp70) member 1A Source HGNC Symbol Acc HGNC 5232
F06	SBH0418033	ENST00000375654.5	HSPA1L	ENSG00000204390	heat shock protein family A (Hsp70) member 1 like Source HGNC Symbol Acc HGNC 5234
F07	SBH0647573	ENST00000394709.2	HSPA2	ENSG00000126803	heat shock protein family A (Hsp70) member 2 Source HGNC Symbol Acc HGNC 5235
F08	SBH1220071	ENST00000617074.4	HSPA4	ENSG00000170606	heat shock protein family A (Hsp70) member 4 Source HGNC Symbol Acc HGNC 5237
F09	SBH1220072	ENST00000324460.7	HSPA5	ENSG00000044574	heat shock protein family A (Hsp70) member 5 Source HGNC Symbol Acc HGNC 5238
F10	SBH1220073	ENST00000534319.5	HSPA8	ENSG00000109971	heat shock protein family A (Hsp70) member 8 Source HGNC Symbol Acc HGNC 5241

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0281690	ENST00000649126.1	HSPA9	ENSG00000113013	heat shock protein family A (Hsp70) member 9 Source HGNC Symbol Acc HGNC 5244
F12	SBH0474094	ENST00000429938.1	HSPB1	ENSG00000106211	heat shock protein family B (small) member 1 Source HGNC Symbol Acc HGNC 5246
G01	SBH0237212	ENST00000304298.4	HSPB2	ENSG00000170276	heat shock protein family B (small) member 2 Source HGNC Symbol Acc HGNC 5247
G02	SBH0301932	ENST00000302005.3	HSPB3	ENSG00000169271	heat shock protein family B (small) member 3 Source HGNC Symbol Acc HGNC 5248
G03	SBH1220074	ENST00000388968.8	HSPD1	ENSG00000144381	heat shock protein family D (Hsp60) member 1 Source HGNC Symbol Acc HGNC 5261
G04	SBH0341745	ENST00000409729.1	HSPE1	ENSG00000115541	heat shock protein family E (Hsp10) member 1 Source HGNC Symbol Acc HGNC 5269
G05	SBH0406177	ENST00000307720.4	PPID	ENSG00000171497	peptidylprolyl isomerase D Source HGNC Symbol Acc HGNC 9257
G06	SBH0596911	ENST00000358171.7	SERPINH1	ENSG00000149257	serpin family H member 1 Source HGNC Symbol Acc HGNC 1546
G07	SBH0278498	ENST00000270142.10	SOD1	ENSG00000142168	superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179
G08	SBH1220414	ENST00000535561.5	SOD2	ENSG00000112096	superoxide dismutase 2 Source HGNC Symbol Acc HGNC 11180
G09	SBH1220415	ENST00000382120.4	SOD3	ENSG00000109610	superoxide dismutase 3 Source HGNC Symbol Acc HGNC 11181
G10	SBH0657535	ENST00000216218.8	ST13	ENSG00000100380	ST13, Hsp70 interacting protein Source HGNC Symbol Acc HGNC 11343
G11	SBH0165501	ENST00000538128.5	TCP1	ENSG00000120438	t-complex 1 Source HGNC Symbol Acc HGNC 11655
G12	SBH0661683	ENST00000379416.4	XDH	ENSG00000158125	xanthine dehydrogenase Source HGNC Symbol Acc HGNC 12805
H01	SBH1220543	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	SBH1220550	ENST00000558401.6	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	SBH1220545	ENST00000396861.5	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	SBH1220546	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	SBH1220553	ENST00000546989.5	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	SBH1218553	Sybr_HGDC	HGDC	Sybr_HGDC	Human 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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