

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

## Human Oxidative Stress

Cat. no. 249950 SBHS-065ZA

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	ALB	ALOX12	AOX1	APOE	ATOX1	BNIP3	CAT	CCL5	CCS	CYBB	CYGB	DHCR24
B	DUOX1	DUOX2	DUSP1	EPHX2	EPX	FOXO1	FTH1	GCLC	GCLM	GPX1	GPX2	GPX3
C	GPX4	GPX5	GPX6	GPX7	GSR	GSS	GSTP1	GSTZ1	GTF2I	HMOX1	HSPA1A	KRT1
D	LPO	MB	MBL2	MGST3	MPO	MPV17	MSRA	MT3	NCF1	NCF2	NOS2	NOX4
E	NOX5	NGO1	NUDT1	OXR1	OXS1	PDLIM1	PNKP	PRDX1	PRDX2	PRDX3	PRDX4	PRDX5
F	PRDX6	PREX1	PRNP	PTGS1	PTGS2	PYDN	RNF7	SCARA3	SELENOS	SELENOP	SFTPD	SIRT2
G	SOD1	SOD2	SOD3	SQSTM1	SRXN1	STK25	TPO	TTN	TXN	TXNRD1	TXNRD2	UCP2
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	SBH1219733	ENST00000621628.4	ALB	ENSG00000163631	albumin Source HGNC Symbol Acc HGNC 399
A02	SBH1219735	ENST00000251535.11	ALOX12	ENSG00000108839	arachidonate 12-lipoxygenase, 12S type Source HGNC Symbol Acc HGNC 429
A03	SBH1219744	ENST00000454629.1	AOX1	ENSG00000138356	aldehyde oxidase 1 Source HGNC Symbol Acc HGNC 553
A04	SBH0562930	ENST00000434152.5	APOE	ENSG00000130203	apolipoprotein E Source HGNC Symbol Acc HGNC 613
A05	SBH0440975	ENST00000520382.5	ATOX1	ENSG00000177556	antioxidant 1 copper chaperone Source HGNC Symbol Acc HGNC 798
A06	SBH1219810	ENST00000540159.3	BNIP3	ENSG00000176171	BCL2 interacting protein 3 Source HGNC Symbol Acc HGNC 1084
A07	SBH1219829	ENST00000648322.1	CAT	ENSG00000121691	catalase Source HGNC Symbol Acc HGNC 1516
A08	SBH1219840	ENST00000603197.6	CCL5	ENSG00000271503	C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632
A09	SBH1219856	ENST00000310190.8	CCS	ENSG00000173992	copper chaperone for superoxide dismutase Source HGNC Symbol Acc HGNC 1613
A10	SBH1219935	ENST00000378588.4	CYBB	ENSG00000165168	cytochrome b-245 beta chain Source HGNC Symbol Acc HGNC 2578
A11	SBH0559484	ENST00000589342.1	CYGB	ENSG00000161544	cytoglobin Source HGNC Symbol Acc HGNC 16505
A12	SBH1219947	ENST00000371269.9	DHCR24	ENSG00000116133	24-dehydrocholesterol reductase Source HGNC Symbol Acc HGNC 2859
B01	SBH1219961	ENST00000561166.1	DUOX1	ENSG00000137857	dual oxidase 1 Source HGNC Symbol Acc HGNC 3062
B02	SBH0106490	ENST00000603300.1	DUOX2	ENSG00000140279	dual oxidase 2 Source HGNC Symbol Acc HGNC 13273
B03	SBH1219962	ENST00000239223.4	DUSP1	ENSG00000120129	dual specificity phosphatase 1 Source HGNC Symbol Acc HGNC 3064
B04	SBH0538671	ENST00000521400.5	EPHX2	ENSG00000120915	epoxide hydrolase 2 Source HGNC Symbol Acc HGNC 3402
B05	SBH1219980	ENST00000225371.6	EPX	ENSG00000121053	eosinophil peroxidase Source HGNC Symbol Acc HGNC 3423
B06	SBH0123059	ENST00000359843.7	FOXM1	ENSG00000111206	forkhead box M1 Source HGNC Symbol Acc HGNC 3818
B07	SBH1220010	ENST00000273550.12	FTH1	ENSG00000167996	ferritin heavy chain 1 Source HGNC Symbol Acc HGNC 3976
B08	SBH0482856	ENST00000229416.10	GCLC	ENSG00000001084	glutamate-cysteine ligase catalytic subunit Source HGNC Symbol Acc HGNC 4311
B09	SBH1220025	ENST00000615724.1	GCLM	ENSG00000023909	glutamate-cysteine ligase modifier subunit Source HGNC Symbol Acc HGNC 4312
B10	SBH1220032	ENST00000620890.1	GPX1	ENSG00000233276	glutathione peroxidase 1 Source HGNC Symbol Acc HGNC 4553
B11	SBH1220033	ENST00000612794.1	GPX2	ENSG00000176153	glutathione peroxidase 2 Source HGNC Symbol Acc HGNC 4554
B12	SBH1220034	ENST00000521650.5	GPX3	ENSG00000211445	glutathione peroxidase 3 Source HGNC Symbol Acc HGNC 4555
C01	SBH0561926	ENST00000354171.12	GPX4	ENSG00000167468	glutathione peroxidase 4 Source HGNC Symbol Acc HGNC 4556
C02	SBH1220035	ENST00000412168.6	GPX5	ENSG00000224586	glutathione peroxidase 5 Source HGNC Symbol Acc HGNC 4557
C03	SBH1220036	ENST00000361902.5	GPX6	ENSG00000198704	glutathione peroxidase 6 Source HGNC Symbol Acc HGNC 4558
C04	SBH1220037	ENST00000361314.5	GPX7	ENSG00000116157	glutathione peroxidase 7 Source HGNC Symbol Acc HGNC 4559
C05	SBH1220042	ENST00000546342.5	GSR	ENSG00000104687	glutathione-disulfide reductase Source HGNC Symbol Acc HGNC 4623
C06	SBH0048224	ENST00000216951.7	GSS	ENSG00000100983	glutathione synthetase Source HGNC Symbol Acc HGNC 4624
C07	SBH1220043	ENST00000642444.1	GSTP1	ENSG00000084207	glutathione S-transferase pi 1 Source HGNC Symbol Acc HGNC 4638
C08	SBH0368849	ENST00000553431.5	GSTZ1	ENSG00000100577	glutathione S-transferase zeta 1 Source HGNC Symbol Acc HGNC 4643
C09	SBH0173406	ENST00000620879.4	GTF2I	ENSG00000263001	general transcription factor Ili Source HGNC Symbol Acc HGNC 4659
C10	SBH1220067	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
		ENST00000375		ENSG000000	heat shock protein family A (Hsp70) member 1A Source HGNC Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0315359	651.6	HSPA1A	204389	HGNC 5232
C12	SBH0079137	ENST00000252244.3	KRT1	ENSG00000167768	keratin 1 Source HGNC Symbol Acc HGNC 6412
D01	SBH0520446	ENST00000262290.8	LPO	ENSG00000167419	lactoperoxidase Source HGNC Symbol Acc HGNC 6678
D02	SBH1220196	ENST00000443033.5	MB	ENSG00000198125	myoglobin Source HGNC Symbol Acc HGNC 6915
D03	SBH0384612	ENST00000373968.3	MBL2	ENSG00000165471	mannose binding lectin 2 Source HGNC Symbol Acc HGNC 6922
D04	SBH1220211	ENST00000367888.8	MGST3	ENSG00000143198	microsomal glutathione S-transferase 3 Source HGNC Symbol Acc HGNC 7064
D05	SBH0239322	ENST00000225275.3	MPO	ENSG00000005381	myeloperoxidase Source HGNC Symbol Acc HGNC 7218
D06	SBH0138059	ENST00000380044.6	MPV17	ENSG00000115204	mitochondrial inner membrane protein MPV17 Source HGNC Symbol Acc HGNC 7224
D07	SBH0585841	ENST00000522907.5	MSRA	ENSG00000175806	methionine sulfoxide reductase A Source HGNC Symbol Acc HGNC 7377
D08	SBH1220231	ENST00000561640.5	MT3	ENSG00000087250	metallothionein 3 Source HGNC Symbol Acc HGNC 7408
D09	SBH0562991	ENST00000289473.8	NCF1	ENSG00000158517	neutrophil cytosolic factor 1 Source HGNC Symbol Acc HGNC 7660
D10	SBH0436209	ENST00000367535.7	NCF2	ENSG00000116701	neutrophil cytosolic factor 2 Source HGNC Symbol Acc HGNC 7661
D11	SBH0408796	ENST00000313735.10	NOS2	ENSG00000007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
D12	SBH1220274	ENST00000525196.5	NOX4	ENSG00000086991	NADPH oxidase 4 Source HGNC Symbol Acc HGNC 7891
E01	SBH1220275	ENST00000448182.7	NOX5	ENSG00000255346	NADPH oxidase 5 Source HGNC Symbol Acc HGNC 14874
E02	SBH1220279	ENST00000320623.10	NQO1	ENSG00000181019	NAD(P)H quinone dehydrogenase 1 Source HGNC Symbol Acc HGNC 2874
E03	SBH0380548	ENST00000356714.5	NUDT1	ENSG00000106268	nudix hydrolase 1 Source HGNC Symbol Acc HGNC 8048
E04	SBH0424803	ENST00000312046.10	OXR1	ENSG00000164830	oxidation resistance 1 Source HGNC Symbol Acc HGNC 15822
E05	SBH0208883	ENST00000446845.5	OXS1	ENSG00000172939	oxidative stress responsive kinase 1 Source HGNC Symbol Acc HGNC 8508
E06	SBH1220296	ENST00000329399.7	PDLIM1	ENSG00000107438	PDZ and LIM domain 1 Source HGNC Symbol Acc HGNC 2067
E07	SBH1220318	ENST00000322344.8	PNKP	ENSG00000039650	polynucleotide kinase 3 -phosphatase Source HGNC Symbol Acc HGNC 9154
E08	SBH0204919	ENST00000262746.5	PRDX1	ENSG00000117450	peroxiredoxin 1 Source HGNC Symbol Acc HGNC 9352
E09	SBH1220327	ENST00000301522.3	PRDX2	ENSG00000167815	peroxiredoxin 2 Source HGNC Symbol Acc HGNC 9353
E10	SBH1220328	ENST00000298510.4	PRDX3	ENSG00000165672	peroxiredoxin 3 Source HGNC Symbol Acc HGNC 9354
E11	SBH1220329	ENST00000379341.9	PRDX4	ENSG00000123131	peroxiredoxin 4 Source HGNC Symbol Acc HGNC 17169
E12	SBH0542658	ENST00000347941.4	PRDX5	ENSG00000126432	peroxiredoxin 5 Source HGNC Symbol Acc HGNC 9355
F01	SBH1220330	ENST00000340385.6	PRDX6	ENSG00000117592	peroxiredoxin 6 Source HGNC Symbol Acc HGNC 16753
F02	SBH1220331	ENST00000371941.4	PREX1	ENSG00000124126	phosphatidylinositol-3,4,5-trisphosphate dependent Rac exchange factor 1 Source HGNC Symbol Acc HGNC 32594
F03	SBH1220337	ENST00000379440.8	PRNP	ENSG00000171867	prion protein Source HGNC Symbol Acc HGNC 9449
F04	SBH1220343	ENST00000540753.6	PTGS1	ENSG00000095303	prostaglandin-endoperoxide synthase 1 Source HGNC Symbol Acc HGNC 9604
F05	SBH1220344	ENST00000367468.10	PTGS2	ENSG00000073756	prostaglandin-endoperoxide synthase 2 Source HGNC Symbol Acc HGNC 9605
F06	SBH1220347	ENST00000433670.5	PXDN	ENSG00000130508	peroxidasin Source HGNC Symbol Acc HGNC 14966
F07	SBH1220374	ENST00000273480.4	RNF7	ENSG00000114125	ring finger protein 7 Source HGNC Symbol Acc HGNC 10070
F08	SBH1220381	ENST00000337221.8	SCARA3	ENSG00000168077	scavenger receptor class A member 3 Source HGNC Symbol Acc HGNC 19000
F09	SBH1220519	ENST00000528346.1	SELENOS	ENSG00000131871	selenoprotein S Source HGNC Symbol Acc HGNC 30396
F10	SBH1220387	ENST00000511224.5	SELENOP	ENSG00000250722	selenoprotein P Source HGNC Symbol Acc HGNC 10751

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH1220396	ENST00000372292.8	SFTPD	ENSG00000133661	surfactant protein D Source HGNC Symbol Acc HGNC 10803
F12	SBH1220399	ENST00000414941.5	SIRT2	ENSG00000068903	sirtuin 2 Source HGNC Symbol Acc HGNC 10886
G01	SBH0278498	ENST00000270142.10	SOD1	ENSG00000142168	superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179
G02	SBH1220414	ENST00000535561.5	SOD2	ENSG00000112096	superoxide dismutase 2 Source HGNC Symbol Acc HGNC 11180
G03	SBH1220415	ENST00000382120.4	SOD3	ENSG00000109610	superoxide dismutase 3 Source HGNC Symbol Acc HGNC 11181
G04	SBH0567619	ENST00000466342.1	SQSTM1	ENSG00000161011	sequestosome 1 Source HGNC Symbol Acc HGNC 11280
G05	SBH0329436	ENST00000381962.3	SRXN1	ENSG00000271303	sulfiredoxin 1 Source HGNC Symbol Acc HGNC 16132
G06	SBH1220426	ENST00000535007.5	STK25	ENSG00000115694	serine/threonine kinase 25 Source HGNC Symbol Acc HGNC 11404
G07	SBH1220490	ENST00000346956.7	TPO	ENSG00000115705	thyroid peroxidase Source HGNC Symbol Acc HGNC 12015
G08	SBH1220495	ENST00000615779.5	TTN	ENSG00000155657	titin Source HGNC Symbol Acc HGNC 12403
G09	SBH1220497	ENST00000374517.6	TXN	ENSG00000136810	thioredoxin Source HGNC Symbol Acc HGNC 12435
G10	SBH0296369	ENST00000526691.5	TXNRD1	ENSG00000198431	thioredoxin reductase 1 Source HGNC Symbol Acc HGNC 12437
G11	SBH1220499	ENST00000400518.5	TXNRD2	ENSG00000184470	thioredoxin reductase 2 Source HGNC Symbol Acc HGNC 18155
G12	SBH1220503	ENST00000536983.5	UCP2	ENSG00000175567	uncoupling protein 2 Source HGNC Symbol Acc HGNC 12518
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.

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.