

# QuantiNova® LNA® Probe PCR Focus Panels (Rotor-Gene® Format)

## Human Oxidative Stress

Cat. no. 249955 UPHS-065ZR

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 (Rotor-Gene): QuantiNova LNA Probe PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. 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	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	PXDN	RNF7	SCARA3	SELENOS	SELENOP	SFTPD	SIRT2
G	SOD1	SOD2	SOD3	SQSTM1	SRXN1	STK25	TPO	TTN	TXN	TXNRD1	TXNRD2	UCP2
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH1132224	ENST00000415 165.6	ALB	ENSG000000 163631	albumin Source HGNC Symbol Acc HGNC 399
A02	UPFH1132226	ENST00000251 535.11	ALOX12	ENSG000000 108839	arachidonate 12-lipoxygenase, 12S type Source HGNC Symbol Acc HGNC 429
A03	UPFH1132776	ENST00000374 700.7	AOX1	ENSG000000 138356	aldehyde oxidase 1 Source HGNC Symbol Acc HGNC 553
A04	UPFH0539669	ENST00000425 718.1	APOE	ENSG000000 130203	apolipoprotein E Source HGNC Symbol Acc HGNC 613
A05	UPFH1132253	ENST00000522 314.5	ATOX1	ENSG000000 177556	antioxidant 1 copper chaperone Source HGNC Symbol Acc HGNC 798
A06	UPFH0140616	ENST00000633 835.1	BNIP3	ENSG000000 176171	BCL2 interacting protein 3 Source HGNC Symbol Acc HGNC 1084
A07	UPFH1132782	ENST00000648 322.1	CAT	ENSG000000 121691	catalase Source HGNC Symbol Acc HGNC 1516
A08	UPFH1132786	ENST00000603 197.6	CCL5	ENSG000000 271503	C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632
A09	UPFH0186344	ENST00000531 990.1	CCS	ENSG000000 173992	copper chaperone for superoxide dismutase Source HGNC Symbol Acc HGNC 1613
A10	UPFH0181004	ENST00000378 588.4	CYBB	ENSG000000 165168	cytochrome b-245 beta chain Source HGNC Symbol Acc HGNC 2578
A11	UPFH1132800	ENST00000293 230.10	CYGB	ENSG000000 161544	cytoglobin Source HGNC Symbol Acc HGNC 16505
A12	UPFH0345634	ENST00000648 712.1	DHCR24	ENSG000000 116133	24-dehydrocholesterol reductase Source HGNC Symbol Acc HGNC 2859
B01	UPFH1132890	ENST00000561 166.1	DUOX1	ENSG000000 137857	dual oxidase 1 Source HGNC Symbol Acc HGNC 3062
B02	UPFH0475247	ENST00000603 300.1	DUOX2	ENSG000000 140279	dual oxidase 2 Source HGNC Symbol Acc HGNC 13273
B03	UPFH1132372	ENST00000239 223.4	DUSP1	ENSG000000 120129	dual specificity phosphatase 1 Source HGNC Symbol Acc HGNC 3064
B04	UPFH0039157	ENST00000521 400.5	EPHX2	ENSG000000 120915	epoxide hydrolase 2 Source HGNC Symbol Acc HGNC 3402
B05	UPFH1132387	ENST00000225 371.6	EPX	ENSG000000 121053	eosinophil peroxidase Source HGNC Symbol Acc HGNC 3423
B06	UPFH1132402	ENST00000361 953.7	FOXM1	ENSG000000 111206	forkhead box M1 Source HGNC Symbol Acc HGNC 3818
B07	UPFH1132404	ENST00000532 601.1	FTH1	ENSG000000 167996	ferritin heavy chain 1 Source HGNC Symbol Acc HGNC 3976
B08	UPFH0516671	ENST00000229 416.10	GCLC	ENSG000000 001084	glutamate-cysteine ligase catalytic subunit Source HGNC Symbol Acc HGNC 4311
B09	UPFH1132418	ENST00000370 238.8	GCLM	ENSG000000 023909	glutamate-cysteine ligase modifier subunit Source HGNC Symbol Acc HGNC 4312
B10	UPFH1132423	ENST00000419 783.3	GPX1	ENSG000000 233276	glutathione peroxidase 1 Source HGNC Symbol Acc HGNC 4553
B11	UPFH1132802	ENST00000612 794.1	GPX2	ENSG000000 176153	glutathione peroxidase 2 Source HGNC Symbol Acc HGNC 4554
B12	UPFH1132803	ENST00000622 181.4	GPX3	ENSG000000 211445	glutathione peroxidase 3 Source HGNC Symbol Acc HGNC 4555
C01	UPFH0616763	ENST00000354 171.12	GPX4	ENSG000000 167468	glutathione peroxidase 4 Source HGNC Symbol Acc HGNC 4556
C02	UPFH1132804	ENST00000412 168.6	GPX5	ENSG000000 224586	glutathione peroxidase 5 Source HGNC Symbol Acc HGNC 4557
C03	UPFH1132424	ENST00000361 902.5	GPX6	ENSG000000 198704	glutathione peroxidase 6 Source HGNC Symbol Acc HGNC 4558
C04	UPFH1132425	ENST00000361 314.5	GPX7	ENSG000000 116157	glutathione peroxidase 7 Source HGNC Symbol Acc HGNC 4559
C05	UPFH1132805	ENST00000546 342.5	GSR	ENSG000000 104687	glutathione-disulfide reductase Source HGNC Symbol Acc HGNC 4623
C06	UPFH1132429	ENST00000216 951.7	GSS	ENSG000000 100983	glutathione synthetase Source HGNC Symbol Acc HGNC 4624
C07	UPFH0262059	ENST00000398 606.8	GSTP1	ENSG000000 084207	glutathione S-transferase pi 1 Source HGNC Symbol Acc HGNC 4638
C08	UPFH1132430	ENST00000557 639.5	GSTZ1	ENSG000000 100577	glutathione S-transferase zeta 1 Source HGNC Symbol Acc HGNC 4643
C09	UPFH1132431	ENST00000614 986.4	GTF2I	ENSG000000 263001	general transcription factor Ili Source HGNC Symbol Acc HGNC 4659
C10	UPFH0433285	ENST00000216 117.9	HMOX1	ENSG000000 100292	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	UPFH1126009	651.6	HSPA1A	204389	HGNC 5232
C12	UPFH0560139	ENST00000252 244.3	KRT1	ENSG00000 167768	keratin 1 Source HGNC Symbol Acc HGNC 6412
D01	UPFH1132823	ENST00000262 290.8	LPO	ENSG00000 167419	lactoperoxidase Source HGNC Symbol Acc HGNC 6678
D02	UPFH0441488	ENST00000406 324.5	MB	ENSG00000 198125	myoglobin Source HGNC Symbol Acc HGNC 6915
D03	UPFH0432165	ENST00000373 968.3	MBL2	ENSG00000 165471	mannose binding lectin 2 Source HGNC Symbol Acc HGNC 6922
D04	UPFH1132547	ENST00000367 884.6	MGST3	ENSG00000 143198	microsomal glutathione S-transferase 3 Source HGNC Symbol Acc HGNC 7064
D05	UPFH0147710	ENST00000225 275.3	MPO	ENSG00000 005381	myeloperoxidase Source HGNC Symbol Acc HGNC 7218
D06	UPFH1132555	ENST00000233 545.6	MPV17	ENSG00000 115204	mitochondrial inner membrane protein MPV17 Source HGNC Symbol Acc HGNC 7224
D07	UPFH1132559	ENST00000528 246.5	MSRA	ENSG00000 175806	methionine sulfoxide reductase A Source HGNC Symbol Acc HGNC 7377
D08	UPFH1132878	ENST00000200 691.4	MT3	ENSG00000 087250	metallothionein 3 Source HGNC Symbol Acc HGNC 7408
D09	UPFH1132968	ENST00000289 473.8	NCF1	ENSG00000 158517	neutrophil cytosolic factor 1 Source HGNC Symbol Acc HGNC 7660
D10	UPFH0335244	ENST00000367 535.7	NCF2	ENSG00000 116701	neutrophil cytosolic factor 2 Source HGNC Symbol Acc HGNC 7661
D11	UPFH0572128	ENST00000313 735.10	NOS2	ENSG00000 007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
D12	UPFH0055322	ENST00000531 342.5	NOX4	ENSG00000 086991	NADPH oxidase 4 Source HGNC Symbol Acc HGNC 7891
E01	UPFH1132595	ENST00000260 364.9	NOX5	ENSG00000 255346	NADPH oxidase 5 Source HGNC Symbol Acc HGNC 14874
E02	UPFH1132829	ENST00000320 623.10	NQO1	ENSG00000 181019	NAD(P)H quinone dehydrogenase 1 Source HGNC Symbol Acc HGNC 2874
E03	UPFH0252925	ENST00000339 737.6	NUDT1	ENSG00000 106268	nudix hydrolase 1 Source HGNC Symbol Acc HGNC 8048
E04	UPFH1132881	ENST00000497 705.5	OXR1	ENSG00000 164830	oxidation resistance 1 Source HGNC Symbol Acc HGNC 15822
E05	UPFH0524518	ENST00000467 900.1	OXS1	ENSG00000 172939	oxidative stress responsive kinase 1 Source HGNC Symbol Acc HGNC 8508
E06	UPFH1132612	ENST00000329 399.7	PDLIM1	ENSG00000 107438	PDZ and LIM domain 1 Source HGNC Symbol Acc HGNC 2067
E07	UPFH1132883	ENST00000600 910.5	PNKP	ENSG00000 039650	polynucleotide kinase 3 -phosphatase Source HGNC Symbol Acc HGNC 9154
E08	UPFH1132631	ENST00000262 746.5	PRDX1	ENSG00000 117450	peroxiredoxin 1 Source HGNC Symbol Acc HGNC 9352
E09	UPFH1132920	ENST00000301 522.3	PRDX2	ENSG00000 167815	peroxiredoxin 2 Source HGNC Symbol Acc HGNC 9353
E10	UPFH1132834	ENST00000298 510.4	PRDX3	ENSG00000 165672	peroxiredoxin 3 Source HGNC Symbol Acc HGNC 9354
E11	UPFH1132835	ENST00000379 341.9	PRDX4	ENSG00000 123131	peroxiredoxin 4 Source HGNC Symbol Acc HGNC 17169
E12	UPFH1125096	ENST00000347 941.4	PRDX5	ENSG00000 126432	peroxiredoxin 5 Source HGNC Symbol Acc HGNC 9355
F01	UPFH1132836	ENST00000340 385.6	PRDX6	ENSG00000 117592	peroxiredoxin 6 Source HGNC Symbol Acc HGNC 16753
F02	UPFH1132632	ENST00000371 941.4	PREX1	ENSG00000 124126	phosphatidylinositol-3,4,5-trisphosphate dependent Rac exchange factor 1 Source HGNC Symbol Acc HGNC 32594
F03	UPFH0419104	ENST00000379 440.8	PRNP	ENSG00000 171867	prion protein Source HGNC Symbol Acc HGNC 9449
F04	UPFH0450481	ENST00000619 306.5	PTGS1	ENSG00000 095303	prostaglandin-endoperoxide synthase 1 Source HGNC Symbol Acc HGNC 9604
F05	UPFH1132642	ENST00000367 468.10	PTGS2	ENSG00000 073756	prostaglandin-endoperoxide synthase 2 Source HGNC Symbol Acc HGNC 9605
F06	UPFH1132645	ENST00000252 804.9	PXDN	ENSG00000 130508	peroxidasin Source HGNC Symbol Acc HGNC 14966
F07	UPFH1132661	ENST00000480 908.1	RNF7	ENSG00000 114125	ring finger protein 7 Source HGNC Symbol Acc HGNC 10070
F08	UPFH1132923	ENST00000337 221.8	SCARA3	ENSG00000 168077	scavenger receptor class A member 3 Source HGNC Symbol Acc HGNC 19000
F09	UPFH0392383	ENST00000398 226.7	SELENOS	ENSG00000 131871	selenoprotein S Source HGNC Symbol Acc HGNC 30396
F10	UPFH1132669	ENST00000506 577.5	SELENOP	ENSG00000 250722	selenoprotein P Source HGNC Symbol Acc HGNC 10751

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132678	ENST00000372292.8	SFTPD	ENSG00000133661	surfactant protein D Source HGNC Symbol Acc HGNC 10803
F12	UPFH1132681	ENST00000392081.6	SIRT2	ENSG00000068903	sirtuin 2 Source HGNC Symbol Acc HGNC 10886
G01	UPFH0220920	ENST00000270142.10	SOD1	ENSG00000142168	superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179
G02	UPFH1132692	ENST00000367055.8	SOD2	ENSG00000112096	superoxide dismutase 2 Source HGNC Symbol Acc HGNC 11180
G03	UPFH1132842	ENST00000382120.4	SOD3	ENSG00000109610	superoxide dismutase 3 Source HGNC Symbol Acc HGNC 11181
G04	UPFH1132695	ENST00000510187.5	SQSTM1	ENSG00000161011	sequestosome 1 Source HGNC Symbol Acc HGNC 11280
G05	UPFH1132844	ENST00000381962.3	SRXN1	ENSG00000271303	sulfiredoxin 1 Source HGNC Symbol Acc HGNC 16132
G06	UPFH1132699	ENST00000543554.5	STK25	ENSG00000115694	serine/threonine kinase 25 Source HGNC Symbol Acc HGNC 11404
G07	UPFH1132980	ENST00000423320.5	TPO	ENSG00000115705	thyroid peroxidase Source HGNC Symbol Acc HGNC 12015
G08	UPFH1132742	ENST00000591111.5	TTN	ENSG00000155657	titin Source HGNC Symbol Acc HGNC 12403
G09	UPFH1132744	ENST00000374517.6	TXN	ENSG00000136810	thioredoxin Source HGNC Symbol Acc HGNC 12435
G10	UPFH0461384	ENST00000526691.5	TXNRD1	ENSG00000198431	thioredoxin reductase 1 Source HGNC Symbol Acc HGNC 12437
G11	UPFH0369120	ENST00000487165.5	TXNRD2	ENSG00000184470	thioredoxin reductase 2 Source HGNC Symbol Acc HGNC 18155
G12	UPFH0380346	ENST00000544615.5	UCP2	ENSG00000175567	uncoupling protein 2 Source HGNC Symbol Acc HGNC 12518
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human 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.

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