

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

## Human Stress & Toxicity PathwayFinder

Cat. no. 249955 UPHS-003ZA

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 (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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	ADM	AKR1B1	AQP1	AQP2	AQP4	ARNT	ATF4	ATF6	ATF6B	ATG12	ATG5	ATG7
B	ATM	ATR	BBC3	BECN1	BID	BNIP3L	CA9	CALR	CASP1	CCL2	CD40LG	CDKN1A
C	CFTR	CHEK1	CHEK2	CRP	DDB2	DDIT3	DNAJC3	EDN1	EPO	FAS	FTH1	GADD45A
D	GADD45G	GCLC	GCLM	GRB2	GSR	GSTP1	HMOX1	HSP90AA1	HSP90B1	HSPA4	HSPA4L	HSPA5
E	HUS1	IFNG	IL1A	IL1B	IL6	CXCL8	LDHA	MCL1	MMP9	MRE11	NBN	NFAT5
F	NQO1	PARP1	PRDX1	PVR	RAD17	RAD51	RAD9A	RIPK1	SERPINE1	SLC2A1	SLC5A3	SQSTM1
G	TLR4	TNF	TNFRSF10A	TNFRSF10B	TNFRSF1A	TP53	TXN	TXNL4B	TXNRD1	ULK1	VEGFA	XPC
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	UPFH1172899	ENST00000528655.5	ADM	ENSG00000148926	adrenomedullin Source HGNC Symbol Acc HGNC 259
A02	UPFH1132223	ENST00000285930.9	AKR1B1	ENSG00000085662	aldo-keto reductase family 1 member B Source HGNC Symbol Acc HGNC 381
A03	UPFH1132239	ENST00000311813.10	AQP1	ENSG00000240583	aquaporin 1 (Colton blood group) Source HGNC Symbol Acc HGNC 633
A04	UPFH0471106	ENST00000199280.3	AQP2	ENSG00000167580	aquaporin 2 Source HGNC Symbol Acc HGNC 634
A05	UPFH1132240	ENST00000383168.9	AQP4	ENSG00000171885	aquaporin 4 Source HGNC Symbol Acc HGNC 637
A06	UPFH1132241	ENST00000354396.6	ARNT	ENSG00000143437	aryl hydrocarbon receptor nuclear translocator Source HGNC Symbol Acc HGNC 700
A07	UPFH1132244	ENST00000404241.6	ATF4	ENSG00000128272	activating transcription factor 4 Source HGNC Symbol Acc HGNC 786
A08	UPFH1132245	ENST00000367942.4	ATF6	ENSG00000118217	activating transcription factor 6 Source HGNC Symbol Acc HGNC 791
A09	UPFH1132246	ENST00000375203.8	ATF6B	ENSG00000213676	activating transcription factor 6 beta Source HGNC Symbol Acc HGNC 2349
A10	UPFH0095132	ENST00000513322.5	ATG12	ENSG00000145782	autophagy related 12 Source HGNC Symbol Acc HGNC 588
A11	UPFH1132251	ENST00000635758.2	ATG5	ENSG00000057663	autophagy related 5 Source HGNC Symbol Acc HGNC 589
A12	UPFH0133269	ENST00000354449.7	ATG7	ENSG00000197548	autophagy related 7 Source HGNC Symbol Acc HGNC 16935
B01	UPFH1132252	ENST00000527805.5	ATM	ENSG00000149311	ATM serine/threonine kinase Source HGNC Symbol Acc HGNC 795
B02	UPFH1132260	ENST00000350721.9	ATR	ENSG00000175054	ATR serine/threonine kinase Source HGNC Symbol Acc HGNC 882
B03	UPFH0224436	ENST00000439096.2	BBC3	ENSG00000105327	BCL2 binding component 3 Source HGNC Symbol Acc HGNC 17868
B04	UPFH0102826	ENST00000361523.8	BECN1	ENSG00000126581	beclin 1 Source HGNC Symbol Acc HGNC 1034
B05	UPFH0184066	ENST00000622694.4	BID	ENSG00000015475	BH3 interacting domain death agonist Source HGNC Symbol Acc HGNC 1050
B06	UPFH1132277	ENST00000520409.5	BNIP3L	ENSG00000104765	BCL2 interacting protein 3 like Source HGNC Symbol Acc HGNC 1085
B07	UPFH1132903	ENST00000617161.1	CA9	ENSG00000107159	carbonic anhydrase 9 Source HGNC Symbol Acc HGNC 1383
B08	UPFH0025967	ENST00000316448.9	CALR	ENSG00000179218	calreticulin Source HGNC Symbol Acc HGNC 1455
B09	UPFH0285144	ENST00000436863.7	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
B10	UPFH1132783	ENST00000225831.4	CCL2	ENSG00000108691	C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618
B11	UPFH0592498	ENST00000370629.6	CD40LG	ENSG00000102245	CD40 ligand Source HGNC Symbol Acc HGNC 11935
B12	UPFH0312181	ENST00000244741.9	CDKN1A	ENSG00000124762	cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784
C01	UPFH0186636	ENST00000003084.10	CFTR	ENSG00000001626	cystic fibrosis transmembrane conductance regulator Source HGNC Symbol Acc HGNC 1884
C02	UPFH1132313	ENST00000427383.6	CHEK1	ENSG00000149554	checkpoint kinase 1 Source HGNC Symbol Acc HGNC 1925
C03	UPFH1132314	ENST00000439200.5	CHEK2	ENSG00000183765	checkpoint kinase 2 Source HGNC Symbol Acc HGNC 16627
C04	UPFH0143745	ENST00000255030.9	CRP	ENSG00000132693	C-reactive protein Source HGNC Symbol Acc HGNC 2367
C05	UPFH0224958	ENST00000256996.8	DDB2	ENSG00000134574	damage specific DNA binding protein 2 Source HGNC Symbol Acc HGNC 2718
C06	UPFH0523891	ENST00000346473.7	DDIT3	ENSG00000175197	DNA damage inducible transcript 3 Source HGNC Symbol Acc HGNC 2726
C07	UPFH1132364	ENST00000602402.6	DNAJC3	ENSG00000102580	DnaJ heat shock protein family (Hsp40) member C3 Source HGNC Symbol Acc HGNC 9439
C08	UPFH1132801	ENST00000379375.6	EDN1	ENSG00000078401	endothelin 1 Source HGNC Symbol Acc HGNC 3176
C09	UPFH0083071	ENST00000252723.3	EPO	ENSG00000130427	erythropoietin Source HGNC Symbol Acc HGNC 3415
C10	UPFH1132395	ENST00000357339.6	FAS	ENSG00000026103	Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920
		ENST00000532		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH1132404	601.1	FTH1	167996	ferritin heavy chain 1 Source HGNC Symbol Acc HGNC 3976
C12	UPFH1132413	ENST00000370985.4	GADD45A	ENSG00000116717	growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095
D01	UPFH1132415	ENST00000375769.1	GADD45G	ENSG00000130222	growth arrest and DNA damage inducible gamma Source HGNC Symbol Acc HGNC 4097
D02	UPFH0516671	ENST00000229416.10	GCLC	ENSG00000001084	glutamate-cysteine ligase catalytic subunit Source HGNC Symbol Acc HGNC 4311
D03	UPFH1132418	ENST00000370238.8	GCLM	ENSG00000023909	glutamate-cysteine ligase modifier subunit Source HGNC Symbol Acc HGNC 4312
D04	UPFH1132426	ENST00000392564.5	GRB2	ENSG000000177885	growth factor receptor bound protein 2 Source HGNC Symbol Acc HGNC 4566
D05	UPFH1132805	ENST00000546342.5	GSR	ENSG000000104687	glutathione-disulfide reductase Source HGNC Symbol Acc HGNC 4623
D06	UPFH0262059	ENST00000398606.8	GSTP1	ENSG000000084207	glutathione S-transferase pi 1 Source HGNC Symbol Acc HGNC 4638
D07	UPFH0433285	ENST00000216117.9	HMOX1	ENSG000000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
D08	UPFH0292880	ENST00000334701.11	HSP90AA1	ENSG000000080824	heat shock protein 90 alpha family class A member 1 Source HGNC Symbol Acc HGNC 5253
D09	UPFH1132456	ENST00000299767.10	HSP90B1	ENSG000000166598	heat shock protein 90 beta family member 1 Source HGNC Symbol Acc HGNC 12028
D10	UPFH1132457	ENST00000304858.7	HSPA4	ENSG000000170606	heat shock protein family A (Hsp70) member 4 Source HGNC Symbol Acc HGNC 5237
D11	UPFH1132458	ENST00000505726.1	HSPA4L	ENSG000000164070	heat shock protein family A (Hsp70) member 4 like Source HGNC Symbol Acc HGNC 17041
D12	UPFH1132459	ENST00000324460.7	HSPA5	ENSG000000044574	heat shock protein family A (Hsp70) member 5 Source HGNC Symbol Acc HGNC 5238
E01	UPFH1132461	ENST00000258774.10	HUS1	ENSG000000136273	HUS1 checkpoint clamp component Source HGNC Symbol Acc HGNC 5309
E02	UPFH1132473	ENST00000229135.4	IFNG	ENSG000000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
E03	UPFH0436255	ENST00000263339.3	IL1A	ENSG000000115008	interleukin 1 alpha Source HGNC Symbol Acc HGNC 5991
E04	UPFH0163764	ENST00000263341.6	IL1B	ENSG000000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
E05	UPFH1172910	ENST00000258743.10	IL6	ENSG000000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
E06	UPFH0120553	ENST00000307407.8	CXCL8	ENSG000000169429	C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025
E07	UPFH1132517	ENST00000422447.8	LDHA	ENSG000000134333	lactate dehydrogenase A Source HGNC Symbol Acc HGNC 6535
E08	UPFH1132538	ENST00000369026.3	MCL1	ENSG000000143384	MCL1, BCL2 family apoptosis regulator Source HGNC Symbol Acc HGNC 6943
E09	UPFH0367626	ENST00000372330.3	MMP9	ENSG000000100985	matrix metalloproteinase 9 Source HGNC Symbol Acc HGNC 7176
E10	UPFH1132556	ENST00000323977.7	MRE11	ENSG000000020922	MRE11 homolog, double strand break repair nuclease Source HGNC Symbol Acc HGNC 7230
E11	UPFH0612261	ENST00000265433.7	NBN	ENSG000000104320	nibrin Source HGNC Symbol Acc HGNC 7652
E12	UPFH0317172	ENST00000354436.6	NFAT5	ENSG000000102908	nuclear factor of activated T cells 5 Source HGNC Symbol Acc HGNC 7774
F01	UPFH1132829	ENST00000320623.10	NQO1	ENSG000000181019	NAD(P)H quinone dehydrogenase 1 Source HGNC Symbol Acc HGNC 2874
F02	UPFH0203594	ENST00000490921.5	PARP1	ENSG000000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
F03	UPFH1132631	ENST00000262746.5	PRDX1	ENSG000000117450	peroxiredoxin 1 Source HGNC Symbol Acc HGNC 9352
F04	UPFH1132644	ENST00000403059.8	PVR	ENSG000000073008	poliovirus receptor Source HGNC Symbol Acc HGNC 9705
F05	UPFH0301660	ENST00000514626.1	RAD17	ENSG000000152942	RAD17 checkpoint clamp loader component Source HGNC Symbol Acc HGNC 9807
F06	UPFH1132651	ENST00000532743.6	RAD51	ENSG000000051180	RAD51 recombinase Source HGNC Symbol Acc HGNC 9817
F07	UPFH0394972	ENST00000529100.5	RAD9A	ENSG000000172613	RAD9 checkpoint clamp component A Source HGNC Symbol Acc HGNC 9827
F08	UPFH0390785	ENST00000380409.2	RIPK1	ENSG000000137275	receptor interacting serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 10019
F09	UPFH0384736	ENST00000223095.4	SERPINE1	ENSG000000106366	serpin family E member 1 Source HGNC Symbol Acc HGNC 8583
F10	UPFH0225912	ENST00000426263.8	SLC2A1	ENSG000000117394	solute carrier family 2 member 1 Source HGNC Symbol Acc HGNC 11005

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132684	ENST00000381151.5	SLC5A3	ENSG00000198743	solute carrier family 5 member 3 Source HGNC Symbol Acc HGNC 11038
F12	UPFH1132695	ENST00000510187.5	SQSTM1	ENSG00000161011	sequestosome 1 Source HGNC Symbol Acc HGNC 11280
G01	UPFH1132859	ENST00000645071.1	TLR4	ENSG00000136869	toll like receptor 4 Source HGNC Symbol Acc HGNC 11850
G02	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G03	UPFH1132888	ENST00000524158.5	TNFRSF10A	ENSG00000104689	TNF receptor superfamily member 10a Source HGNC Symbol Acc HGNC 11904
G04	UPFH1132850	ENST000003347739.3	TNFRSF10B	ENSG00000120889	TNF receptor superfamily member 10b Source HGNC Symbol Acc HGNC 11905
G05	UPFH1132732	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G06	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G07	UPFH1132744	ENST00000374517.6	TXN	ENSG00000136810	thioredoxin Source HGNC Symbol Acc HGNC 12435
G08	UPFH1132745	ENST00000426362.6	TXNL4B	ENSG00000140830	thioredoxin like 4B Source HGNC Symbol Acc HGNC 26041
G09	UPFH0461384	ENST00000526691.5	TXNRD1	ENSG00000198431	thioredoxin reductase 1 Source HGNC Symbol Acc HGNC 12437
G10	UPFH1132747	ENST00000321867.6	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1 Source HGNC Symbol Acc HGNC 12558
G11	UPFH0281656	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
G12	UPFH1132977	ENST00000285021.11	XPC	ENSG00000154767	XPC complex subunit, DNA damage recognition and repair factor Source HGNC Symbol Acc HGNC 12816
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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