

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

## Human Hepatotoxicity

Cat. no. 249955 UPHS-093ZA

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	ABCB1	ABCB11	ABCB4	ABCC2	ABCC3	ALDOA	APEX1	ASAH1	ATP8B1	AVPR1A	BHMT	BTG2
B	CA3	CASP3	CCNG1	CD36	CD68	CDC14B	CDKN1A	COL4A1	CRYL1	CXCL12	CYP1A2	DDIT4L
C	DDX39A	DNAJB11	DNAJC3	FABP1	FADS1	EMC9	FASN	FMO1	TIMM10B	GADD45A	GCLC	GSR
D	HAO2	HMOX1	HPN	HYOU1	ICAM1	IGFALS	IL6ST	IPO4	FAM214A	KRT18	KRT8	L2HGDH
E	LGR5	LPL	LSS	MAOB	MAP3K6	MBL2	MCM10	MLXPL	MRPS18B	NGO1	NUS1	OSMR
F	SLC51A	PDYN	PLA2G12A	PPARA	PSME3	PYGL	RB1	RDX	RHBG	S100A8	SCD	SERPINA3
G	SERPINE1	SKIL	SLC17A3	SLC2A3	SLC39A6	SREBF1	TAGLN	THRSP	CEMIP2	TXNRD1	WIP1	YRDC
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	UPFH0266833	ENST00000483831.1	ABCB1	ENSG00000085563	ATP binding cassette subfamily B member 1 Source HGNC Symbol Acc HGNC 40
A02	UPFH0141625	ENST00000263817.7	ABCB11	ENSG00000073734	ATP binding cassette subfamily B member 11 Source HGNC Symbol Acc HGNC 42
A03	UPFH0185386	ENST00000644106.1	ABCB4	ENSG00000005471	ATP binding cassette subfamily B member 4 Source HGNC Symbol Acc HGNC 45
A04	UPFH0460991	ENST00000649493.1	ABCC2	ENSG00000023839	ATP binding cassette subfamily C member 2 Source HGNC Symbol Acc HGNC 53
A05	UPFH0384648	ENST00000513589.1	ABCC3	ENSG000000108846	ATP binding cassette subfamily C member 3 Source HGNC Symbol Acc HGNC 54
A06	UPFH0184034	ENST00000564688.1	ALDOA	ENSG000000149925	aldolase, fructose-bisphosphate A Source HGNC Symbol Acc HGNC 414
A07	UPFH0321059	ENST00000555414.5	APEX1	ENSG000000100823	apurinic/aprimidinic endodeoxyribonuclease 1 Source HGNC Symbol Acc HGNC 587
A08	UPFH0273095	ENST00000523593.6	ASAH1	ENSG000000104763	N-acylsphingosine amidohydrolase 1 Source HGNC Symbol Acc HGNC 735
A09	UPFH0280440	ENST00000648039.1	ATP8B1	ENSG000000081923	ATPase phospholipid transporting 8B1 Source HGNC Symbol Acc HGNC 3706
A10	UPFH0337699	ENST00000550940.1	AVPR1A	ENSG000000166148	arginine vasopressin receptor 1A Source HGNC Symbol Acc HGNC 895
A11	UPFH0228197	ENST00000520703.1	BHMT	ENSG000000145692	betaine-homocysteine S-methyltransferase Source HGNC Symbol Acc HGNC 1047
A12	UPFH1132281	ENST00000290551.5	BTG2	ENSG000000159388	BTG anti-proliferation factor 2 Source HGNC Symbol Acc HGNC 1131
B01	UPFH0471675	ENST00000522207.1	CA3	ENSG000000164879	carbonic anhydrase 3 Source HGNC Symbol Acc HGNC 1374
B02	UPFH1132892	ENST00000523916.5	CASP3	ENSG000000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B03	UPFH1132299	ENST00000510664.5	CCNG1	ENSG000000113328	cyclin G1 Source HGNC Symbol Acc HGNC 1592
B04	UPFH1125151	ENST00000433696.6	CD36	ENSG000000135218	CD36 molecule Source HGNC Symbol Acc HGNC 1663
B05	UPFH1133194	ENST00000584502.1	CD68	ENSG000000129226	CD68 molecule Source HGNC Symbol Acc HGNC 1693
B06	UPFH0343889	ENST00000375241.5	CDC14B	ENSG000000081377	cell division cycle 14B Source HGNC Symbol Acc HGNC 1719
B07	UPFH0312181	ENST00000244741.9	CDKN1A	ENSG000000124762	cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784
B08	UPFH0262817	ENST00000615732.2	COL4A1	ENSG000000187498	collagen type IV alpha 1 chain Source HGNC Symbol Acc HGNC 2202
B09	UPFH0524535	ENST00000643750.1	CRYL1	ENSG000000165475	crystallin lambda 1 Source HGNC Symbol Acc HGNC 18246
B10	UPFH0092551	ENST00000374429.6	CXCL12	ENSG000000107562	C-X-C motif chemokine ligand 12 Source HGNC Symbol Acc HGNC 10672
B11	UPFH0144678	ENST00000343932.5	CYP1A2	ENSG000000140505	cytochrome P450 family 1 subfamily A member 2 Source HGNC Symbol Acc HGNC 2596
B12	UPFH0363515	ENST00000273990.6	DDIT4L	ENSG000000145358	DNA damage inducible transcript 4 like Source HGNC Symbol Acc HGNC 30555
C01	UPFH0543314	ENST00000454233.6	DDX39A	ENSG000000123136	DExD-box helicase 39A Source HGNC Symbol Acc HGNC 17821
C02	UPFH0371628	ENST00000265028.7	DNAJB11	ENSG000000090520	DnaJ heat shock protein family (Hsp40) member B11 Source HGNC Symbol Acc HGNC 14889
C03	UPFH1132364	ENST00000602402.6	DNAJC3	ENSG000000102580	DnaJ heat shock protein family (Hsp40) member C3 Source HGNC Symbol Acc HGNC 9439
C04	UPFH0465765	ENST00000295834.7	FABP1	ENSG000000163586	fatty acid binding protein 1 Source HGNC Symbol Acc HGNC 3555
C05	UPFH0141958	ENST00000542506.5	FADS1	ENSG000000149485	fatty acid desaturase 1 Source HGNC Symbol Acc HGNC 3574
C06	UPFH0290794	ENST00000216799.9	EMC9	ENSG000000100908	ER membrane protein complex subunit 9 Source HGNC Symbol Acc HGNC 20273
C07	UPFH0422393	ENST00000635197.1	FASN	ENSG000000169710	fatty acid synthase Source HGNC Symbol Acc HGNC 3594
C08	UPFH0518351	ENST00000354841.4	FMO1	ENSG000000010932	flavin containing monooxygenase 1 Source HGNC Symbol Acc HGNC 3769
C09	UPFH0096113	ENST00000530751.1	TIMM10B	ENSG000000132286	translocase of inner mitochondrial membrane 10B Source HGNC Symbol Acc HGNC 4022
C10	UPFH1132413	ENST00000370985.4	GADD45A	ENSG000000116717	growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095
		ENST000002229		ENSG000000	glutamate-cysteine ligase catalytic subunit Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0516671	416.10	GCLC	001084	4311
C12	UPFH1132805	ENST00000546342.5	GSR	ENSG00000104687	glutathione-disulfide reductase Source HGNC Symbol Acc HGNC 4623
D01	UPFH0135572	ENST00000457318.5	HAO2	ENSG00000116882	hydroxyacid oxidase 2 Source HGNC Symbol Acc HGNC 4810
D02	UPFH0433285	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
D03	UPFH0344390	ENST00000262626.6	HPN	ENSG00000105707	hepsin Source HGNC Symbol Acc HGNC 5155
D04	UPFH0204384	ENST00000617285.5	HYOU1	ENSG00000149428	hypoxia up-regulated 1 Source HGNC Symbol Acc HGNC 16931
D05	UPFH1132462	ENST00000264832.8	ICAM1	ENSG00000090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
D06	UPFH0226158	ENST00000415638.3	IGFALS	ENSG00000099769	insulin like growth factor binding protein acid labile subunit Source HGNC Symbol Acc HGNC 5468
D07	UPFH0582962	ENST00000523039.5	IL6ST	ENSG00000134352	interleukin 6 signal transducer Source HGNC Symbol Acc HGNC 6021
D08	UPFH0325610	ENST00000561462.5	IPO4	ENSG00000196497	importin 4 Source HGNC Symbol Acc HGNC 19426
D09	UPFH0489647	ENST00000534964.6	FAM214A	ENSG00000047346	family with sequence similarity 214 member A Source HGNC Symbol Acc HGNC 25609
D10	UPFH0381528	ENST00000388835.4	KRT18	ENSG00000111057	keratin 18 Source HGNC Symbol Acc HGNC 6430
D11	UPFH0434758	ENST00000547176.3	KRT8	ENSG00000170421	keratin 8 Source HGNC Symbol Acc HGNC 6446
D12	UPFH0567241	ENST00000261699.8	L2HGDH	ENSG00000087299	L-2-hydroxyglutarate dehydrogenase Source HGNC Symbol Acc HGNC 20499
E01	UPFH0425040	ENST00000536515.5	LGR5	ENSG00000139292	leucine rich repeat containing G protein-coupled receptor 5 Source HGNC Symbol Acc HGNC 4504
E02	UPFH1132523	ENST00000311322.10	LPL	ENSG00000175445	lipoprotein lipase Source HGNC Symbol Acc HGNC 6677
E03	UPFH0102790	ENST00000464357.1	LSS	ENSG00000160285	lanosterol synthase Source HGNC Symbol Acc HGNC 6708
E04	UPFH0020129	ENST00000378069.5	MAOB	ENSG00000069535	monoamine oxidase B Source HGNC Symbol Acc HGNC 6834
E05	UPFH0111771	ENST00000486046.5	MAP3K6	ENSG00000142733	mitogen-activated protein kinase kinase kinase 6 Source HGNC Symbol Acc HGNC 6858
E06	UPFH0432165	ENST00000373968.3	MBL2	ENSG00000165471	mannose binding lectin 2 Source HGNC Symbol Acc HGNC 6922
E07	UPFH0084178	ENST00000459751.1	MCM10	ENSG00000065328	minichromosome maintenance 10 replication initiation factor Source HGNC Symbol Acc HGNC 18043
E08	UPFH0511182	ENST00000414749.6	MLXIPL	ENSG00000009950	MLX interacting protein like Source HGNC Symbol Acc HGNC 12744
E09	UPFH0225004	ENST00000472229.1	MRPS18B	ENSG00000204568	mitochondrial ribosomal protein S18B Source HGNC Symbol Acc HGNC 14516
E10	UPFH1132829	ENST00000320623.10	NQO1	ENSG00000181019	NAD(P)H quinone dehydrogenase 1 Source HGNC Symbol Acc HGNC 2874
E11	UPFH0571590	ENST00000368494.4	NUS1	ENSG00000153989	NUS1, dehydrodolichyl diphosphate synthase subunit Source HGNC Symbol Acc HGNC 21042
E12	UPFH0089755	ENST00000502536.5	OSMR	ENSG00000145623	oncostatin M receptor Source HGNC Symbol Acc HGNC 8507
F01	UPFH0574868	ENST00000296327.10	SLC51A	ENSG00000163959	solute carrier family 51 alpha subunit Source HGNC Symbol Acc HGNC 29955
F02	UPFH0279011	ENST00000651684.1	PDYN	ENSG00000101327	prodynorphin Source HGNC Symbol Acc HGNC 8820
F03	UPFH0512596	ENST00000507961.1	PLA2G12A	ENSG00000123739	phospholipase A2 group X1A Source HGNC Symbol Acc HGNC 18554
F04	UPFH0327373	ENST00000262735.9	PPARA	ENSG00000186951	peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232
F05	UPFH0457761	ENST00000590720.5	PSME3	ENSG00000131467	proteasome activator subunit 3 Source HGNC Symbol Acc HGNC 9570
F06	UPFH1132646	ENST00000544180.6	PYGL	ENSG00000100504	glycogen phosphorylase L Source HGNC Symbol Acc HGNC 9725
F07	UPFH0001483	ENST00000267163.5	RB1	ENSG00000139687	RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884
F08	UPFH0413152	ENST00000646663.1	RDX	ENSG00000137710	radixin Source HGNC Symbol Acc HGNC 9944
F09	UPFH0300628	ENST00000620376.4	RHBG	ENSG00000132677	Rh family B glycoprotein (gene/pseudogene) Source HGNC Symbol Acc HGNC 14572
F10	UPFH0240332	ENST00000368732.5	S100A8	ENSG00000143546	S100 calcium binding protein A8 Source HGNC Symbol Acc HGNC 10498

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0108490	ENST00000370355.3	SCD	ENSG00000099194	stearoyl-CoA desaturase Source HGNC Symbol Acc HGNC 10571
F12	UPFH0304898	ENST00000393078.4	SERPINA3	ENSG00000196136	serpin family A member 3 Source HGNC Symbol Acc HGNC 16
G01	UPFH0384736	ENST00000223095.4	SERPINE1	ENSG00000106366	serpin family E member 1 Source HGNC Symbol Acc HGNC 8583
G02	UPFH0052790	ENST00000426052.6	SKIL	ENSG00000136603	SKI like proto-oncogene Source HGNC Symbol Acc HGNC 10897
G03	UPFH0156443	ENST00000449356.2	SLC17A3	ENSG00000124564	solute carrier family 17 member 3 Source HGNC Symbol Acc HGNC 10931
G04	UPFH0576721	ENST00000544291.1	SLC2A3	ENSG00000059804	solute carrier family 2 member 3 Source HGNC Symbol Acc HGNC 11007
G05	UPFH0143098	ENST00000586829.1	SLC39A6	ENSG00000141424	solute carrier family 39 member 6 Source HGNC Symbol Acc HGNC 18607
G06	UPFH0380685	ENST00000490796.1	SREBF1	ENSG00000072310	sterol regulatory element binding transcription factor 1 Source HGNC Symbol Acc HGNC 11289
G07	UPFH0076430	ENST00000529622.1	TAGLN	ENSG00000149591	transgelin Source HGNC Symbol Acc HGNC 11553
G08	UPFH0571013	ENST00000281030.2	THRSP	ENSG00000151365	thyroid hormone responsive Source HGNC Symbol Acc HGNC 11800
G09	UPFH0174021	ENST00000542935.5	CEMIP2	ENSG00000135048	cell migration inducing hyaluronidase 2 Source HGNC Symbol Acc HGNC 11869
G10	UPFH0461384	ENST00000526691.5	TXNRD1	ENSG00000198431	thioredoxin reductase 1 Source HGNC Symbol Acc HGNC 12437
G11	UPFH1132760	ENST00000262139.10	WIPI1	ENSG00000070540	WD repeat domain, phosphoinositide interacting 1 Source HGNC Symbol Acc HGNC 25471
G12	UPFH0184411	ENST00000373044.3	YRDC	ENSG00000196449	yrnC N6-threonylcarbamoyltransferase domain containing Source HGNC Symbol Acc HGNC 28905
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.

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.