

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

## Human Lipoprotein Signaling & Cholesterol Metabolism

Cat. no. 249955 UPHS-080ZA

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	ABCA1	ABCG1	ACAA2	AKR1D1	ANGPTL3	ANKRA2	APOA1	APOA2	APOA4	APOB	APOC3	APOD
B	APOE	APOF	APOL1	APOL2	APOL5	CDH13	CEL	CELA3A	CELA3B	CETP	CNBP	COLEC12
C	CXCL16	CYB5R3	CYP11A1	CYP39A1	CYP46A1	CYP51A1	CYP7A1	CYP7B1	DHCR24	DHCR7	FDFT1	FDPS
D	HDLBP	HMGCR	HMGCS1	HMGCS2	IDI1	IDI2	IL4	INSIG1	INSIG2	LCAT	LDLR	LDLRAP1
E	LEP	LIPE	LRP10	LRP12	LRP1B	LRP6	LRPAP1	MBTPS1	MVD	MVK	NPC1L1	NROB2
F	NR1H4	NSDHL	OLR1	OSBPL1A	OSBPL5	PCSK9	PMVK	PPARD	PRKAA1	PRKAA2	PRKAG2	SCAP
G	SCARF1	SNX17	SOAT1	SORL1	SREBF1	SREBF2	STAB1	STAB2	STARD3	TM7SF2	TRETF1	VLDLR
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	UPFH0384523	ENST00000423487.6	ABCA1	ENSG00000165029	ATP binding cassette subfamily A member 1 Source HGNC Symbol Acc HGNC 29
A02	UPFH0518225	ENST00000398437.1	ABCG1	ENSG00000160179	ATP binding cassette subfamily G member 1 Source HGNC Symbol Acc HGNC 73
A03	UPFH0567027	ENST00000587994.5	ACAA2	ENSG00000167315	acetyl-CoA acyltransferase 2 Source HGNC Symbol Acc HGNC 83
A04	UPFH0528305	ENST00000432161.5	AKR1D1	ENSG00000122787	aldo-keto reductase family 1 member D1 Source HGNC Symbol Acc HGNC 388
A05	UPFH0144853	ENST00000371129.3	ANGPTL3	ENSG00000132855	angiotensinogen like 3 Source HGNC Symbol Acc HGNC 491
A06	UPFH0585464	ENST00000296785.8	ANKRA2	ENSG00000164331	ankyrin repeat family A member 2 Source HGNC Symbol Acc HGNC 13208
A07	UPFH0042718	ENST00000375329.6	APOA1	ENSG00000118137	apolipoprotein A1 Source HGNC Symbol Acc HGNC 600
A08	UPFH0260116	ENST00000491350.1	APOA2	ENSG00000158874	apolipoprotein A2 Source HGNC Symbol Acc HGNC 601
A09	UPFH0106154	ENST00000357780.5	APOA4	ENSG00000110244	apolipoprotein A4 Source HGNC Symbol Acc HGNC 602
A10	UPFH0387821	ENST00000399256.4	APOB	ENSG00000084674	apolipoprotein B Source HGNC Symbol Acc HGNC 603
A11	UPFH0066022	ENST00000375345.3	APOC3	ENSG00000110245	apolipoprotein C3 Source HGNC Symbol Acc HGNC 610
A12	UPFH0319976	ENST00000458447.5	APOD	ENSG00000189058	apolipoprotein D Source HGNC Symbol Acc HGNC 612
B01	UPFH0539669	ENST00000425718.1	APOE	ENSG00000130203	apolipoprotein E Source HGNC Symbol Acc HGNC 613
B02	UPFH0004245	ENST00000398189.4	APOF	ENSG00000175336	apolipoprotein F Source HGNC Symbol Acc HGNC 615
B03	UPFH0332645	ENST00000433768.5	APOL1	ENSG00000100342	apolipoprotein L1 Source HGNC Symbol Acc HGNC 618
B04	UPFH0344114	ENST00000454728.5	APOL2	ENSG00000128335	apolipoprotein L2 Source HGNC Symbol Acc HGNC 619
B05	UPFH0277340	ENST00000249044.2	APOL5	ENSG00000128313	apolipoprotein L5 Source HGNC Symbol Acc HGNC 14869
B06	UPFH0210939	ENST00000428848.7	CDH13	ENSG00000140945	cadherin 13 Source HGNC Symbol Acc HGNC 1753
B07	UPFH0181032	ENST00000372080.6	CEL	ENSG00000170835	carboxyl ester lipase Source HGNC Symbol Acc HGNC 1848
B08	UPFH0386242	ENST00000290122.7	CELA3A	ENSG00000142789	chymotrypsin like elastase family member 3A Source HGNC Symbol Acc HGNC 15944
B09	UPFH1126013	ENST00000337107.10	CELA3B	ENSG00000219073	chymotrypsin like elastase family member 3B Source HGNC Symbol Acc HGNC 15945
B10	UPFH0093179	ENST00000566128.1	CETP	ENSG00000087237	cholesteryl ester transfer protein Source HGNC Symbol Acc HGNC 1869
B11	UPFH0329673	ENST00000451728.6	CNBP	ENSG00000169714	CCHC-type zinc finger nucleic acid binding protein Source HGNC Symbol Acc HGNC 13164
B12	UPFH0006004	ENST00000582147.1	COLEC12	ENSG00000158270	collectin subfamily member 12 Source HGNC Symbol Acc HGNC 16016
C01	UPFH1132797	ENST00000574412.5	CXCL16	ENSG00000161921	C-X-C motif chemokine ligand 16 Source HGNC Symbol Acc HGNC 16642
C02	UPFH0375987	ENST00000407623.7	CYB5R3	ENSG00000100243	cytochrome b5 reductase 3 Source HGNC Symbol Acc HGNC 2873
C03	UPFH0490188	ENST00000566674.5	CYP11A1	ENSG00000140459	cytochrome P450 family 11 subfamily A member 1 Source HGNC Symbol Acc HGNC 2590
C04	UPFH0258988	ENST00000480804.1	CYP39A1	ENSG00000146233	cytochrome P450 family 39 subfamily A member 1 Source HGNC Symbol Acc HGNC 17449
C05	UPFH0492615	ENST00000556313.1	CYP46A1	ENSG00000036530	cytochrome P450 family 46 subfamily A member 1 Source HGNC Symbol Acc HGNC 2641
C06	UPFH0162608	ENST00000003100.13	CYP51A1	ENSG00000001630	cytochrome P450 family 51 subfamily A member 1 Source HGNC Symbol Acc HGNC 2649
C07	UPFH0370331	ENST00000301645.4	CYP7A1	ENSG00000167910	cytochrome P450 family 7 subfamily A member 1 Source HGNC Symbol Acc HGNC 2651
C08	UPFH0193665	ENST00000523954.1	CYP7B1	ENSG00000172817	cytochrome P450 family 7 subfamily B member 1 Source HGNC Symbol Acc HGNC 2652
C09	UPFH0345634	ENST00000648712.1	DHCR24	ENSG00000116133	24-dehydrocholesterol reductase Source HGNC Symbol Acc HGNC 2859
C10	UPFH0524077	ENST00000525346.5	DHCR7	ENSG00000172893	7-dehydrocholesterol reductase Source HGNC Symbol Acc HGNC 2860
		ENST00000531		ENSG000000	farnesyl-diphosphate farnesyltransferase 1 Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0156727	249.2	FDFT1	079459	3629
C12	UPFH0054888	ENST00000356657.10	FDPS	ENSG00000160752	farnesyl diphosphate synthase Source HGNC Symbol Acc HGNC 3631
D01	UPFH0385292	ENST00000423693.5	HDLBP	ENSG00000115677	high density lipoprotein binding protein Source HGNC Symbol Acc HGNC 4857
D02	UPFH0368825	ENST00000343975.9	HMGCR	ENSG00000113161	3-hydroxy-3-methylglutaryl-CoA reductase Source HGNC Symbol Acc HGNC 5006
D03	UPFH0184133	ENST00000325110.11	HMGCS1	ENSG00000112972	3-hydroxy-3-methylglutaryl-CoA synthase 1 Source HGNC Symbol Acc HGNC 5007
D04	UPFH0279568	ENST00000472375.5	HMGCS2	ENSG00000134240	3-hydroxy-3-methylglutaryl-CoA synthase 2 Source HGNC Symbol Acc HGNC 5008
D05	UPFH0495663	ENST00000429642.2	IDI1	ENSG00000067064	isopentenyl-diphosphate delta isomerase 1 Source HGNC Symbol Acc HGNC 5387
D06	UPFH0429399	ENST00000277517.2	IDI2	ENSG00000148377	isopentenyl-diphosphate delta isomerase 2 Source HGNC Symbol Acc HGNC 23487
D07	UPFH0226437	ENST00000231449.7	IL4	ENSG00000113520	interleukin 4 Source HGNC Symbol Acc HGNC 6014
D08	UPFH0345810	ENST00000340368.9	INSIG1	ENSG00000186480	insulin induced gene 1 Source HGNC Symbol Acc HGNC 6083
D09	UPFH0593358	ENST00000467223.5	INSIG2	ENSG00000125629	insulin induced gene 2 Source HGNC Symbol Acc HGNC 20452
D10	UPFH0376961	ENST00000570980.1	LCAT	ENSG00000213398	lecithin-cholesterol acyltransferase Source HGNC Symbol Acc HGNC 6522
D11	UPFH0616676	ENST00000252444.9	LDLR	ENSG00000130164	low density lipoprotein receptor Source HGNC Symbol Acc HGNC 6547
D12	UPFH0046814	ENST00000484476.5	LDLRAP1	ENSG00000157978	low density lipoprotein receptor adaptor protein 1 Source HGNC Symbol Acc HGNC 18640
E01	UPFH1132519	ENST00000308868.5	LEP	ENSG00000174697	leptin Source HGNC Symbol Acc HGNC 6553
E02	UPFH0552904	ENST00000601189.1	LIPE	ENSG00000079435	lipase E, hormone sensitive type Source HGNC Symbol Acc HGNC 6621
E03	UPFH0014433	ENST00000553002.1	LRP10	ENSG00000197324	LDL receptor related protein 10 Source HGNC Symbol Acc HGNC 14553
E04	UPFH0253458	ENST00000523007.1	LRP12	ENSG00000147650	LDL receptor related protein 12 Source HGNC Symbol Acc HGNC 31708
E05	UPFH0464015	ENST00000437977.5	LRP1B	ENSG00000168702	LDL receptor related protein 1B Source HGNC Symbol Acc HGNC 6693
E06	UPFH1132525	ENST00000543091.1	LRP6	ENSG00000070018	LDL receptor related protein 6 Source HGNC Symbol Acc HGNC 6698
E07	UPFH0558569	ENST00000515119.5	LRPAP1	ENSG00000163956	LDL receptor related protein associated protein 1 Source HGNC Symbol Acc HGNC 6701
E08	UPFH0535700	ENST00000570064.5	MBTPS1	ENSG00000140943	membrane bound transcription factor peptidase, site 1 Source HGNC Symbol Acc HGNC 15456
E09	UPFH1125640	ENST00000563785.5	MVD	ENSG00000167508	mevalonate diphosphate decarboxylase Source HGNC Symbol Acc HGNC 7529
E10	UPFH0051878	ENST00000392727.7	MVK	ENSG00000110921	mevalonate kinase Source HGNC Symbol Acc HGNC 7530
E11	UPFH0374512	ENST00000289547.8	NPC1L1	ENSG00000015520	NPC1 like intracellular cholesterol transporter 1 Source HGNC Symbol Acc HGNC 7898
E12	UPFH1125145	ENST00000254227.4	NR0B2	ENSG00000131910	nuclear receptor subfamily 0 group B member 2 Source HGNC Symbol Acc HGNC 7961
F01	UPFH0255215	ENST00000188403.7	NR1H4	ENSG00000012504	nuclear receptor subfamily 1 group H member 4 Source HGNC Symbol Acc HGNC 7967
F02	UPFH0415673	ENST00000370274.8	NSDHL	ENSG00000147383	NAD(P) dependent steroid dehydrogenase-like Source HGNC Symbol Acc HGNC 13398
F03	UPFH1132602	ENST00000539518.5	OLR1	ENSG00000173391	oxidized low density lipoprotein receptor 1 Source HGNC Symbol Acc HGNC 8133
F04	UPFH0091025	ENST00000399443.7	OSBPL1A	ENSG00000141447	oxysterol binding protein like 1A Source HGNC Symbol Acc HGNC 16398
F05	UPFH0192466	ENST00000534454.5	OSBPL5	ENSG00000021762	oxysterol binding protein like 5 Source HGNC Symbol Acc HGNC 16392
F06	UPFH0534638	ENST00000302118.5	PCSK9	ENSG00000169174	proprotein convertase subtilisin/kexin type 9 Source HGNC Symbol Acc HGNC 20001
F07	UPFH0060565	ENST00000368467.4	PMVK	ENSG00000163344	phosphomevalonate kinase Source HGNC Symbol Acc HGNC 9141
F08	UPFH1132629	ENST00000448077.6	PPARD	ENSG00000112033	peroxisome proliferator activated receptor delta Source HGNC Symbol Acc HGNC 9235
F09	UPFH0363221	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
F10	UPFH0310374	ENST00000610361.1	PRKAA2	ENSG00000162409	protein kinase AMP-activated catalytic subunit alpha 2 Source HGNC Symbol Acc HGNC 9377

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0382293	ENST00000287878.9	PRKAG2	ENSG00000106617	protein kinase AMP-activated non-catalytic subunit gamma 2 Source HGNC Symbol Acc HGNC 9386
F12	UPFH0258441	ENST00000416208.5	SCAP	ENSG00000114650	SREBF chaperone Source HGNC Symbol Acc HGNC 30634
G01	UPFH0110073	ENST00000434376.6	SCARF1	ENSG00000074660	scavenger receptor class F member 1 Source HGNC Symbol Acc HGNC 16820
G02	UPFH0014503	ENST00000453453.1	SNX17	ENSG00000115234	sorting nexin 17 Source HGNC Symbol Acc HGNC 14979
G03	UPFH0209998	ENST00000540564.5	SOAT1	ENSG00000057252	sterol O-acyltransferase 1 Source HGNC Symbol Acc HGNC 11177
G04	UPFH0473355	ENST00000527934.1	SORL1	ENSG00000137642	sortilin related receptor 1 Source HGNC Symbol Acc HGNC 11185
G05	UPFH0380685	ENST00000490796.1	SREBF1	ENSG00000072310	sterol regulatory element binding transcription factor 1 Source HGNC Symbol Acc HGNC 11289
G06	UPFH0366862	ENST00000462539.1	SREBF2	ENSG00000019891	sterol regulatory element binding transcription factor 2 Source HGNC Symbol Acc HGNC 11290
G07	UPFH0185887	ENST00000481607.1	STAB1	ENSG00000010327	stabilin 1 Source HGNC Symbol Acc HGNC 18628
G08	UPFH0182774	ENST00000388887.7	STAB2	ENSG00000136011	stabilin 2 Source HGNC Symbol Acc HGNC 18629
G09	UPFH0085256	ENST00000580551.5	STARD3	ENSG00000131748	STAR related lipid transfer domain containing 3 Source HGNC Symbol Acc HGNC 17579
G10	UPFH0138836	ENST00000345348.9	TM7SF2	ENSG00000149809	transmembrane 7 superfamily member 2 Source HGNC Symbol Acc HGNC 11863
G11	UPFH0080064	ENST00000340840.6	TRERF1	ENSG00000124496	transcriptional regulating factor 1 Source HGNC Symbol Acc HGNC 18273
G12	UPFH0244470	ENST00000478776.1	VLDLR	ENSG00000147852	very low density lipoprotein receptor Source HGNC Symbol Acc HGNC 12698
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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