

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

## Human Cell Death PathwayFinder

Cat. no. 249955 UPHS-212ZA

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	ABL1	AKT1	APAF1	APP	ATG12	ATG16L1	ATG3	ATG5	ATG7	ATP6V1G2	BAX	BCL2
B	BCL2A1	BCL2L1	BCL2L11	BECN1	BIRC2	BIRC3	BMF	C1orf159	CASP1	CASP2	CASP3	CASP6
C	CASP7	CASP9	CCDC103	CD40	CD40LG	CFLAR	COMMD4	CTSB	CTSS	CYLD	DEFB1	DENND4A
D	DFFA	DPYSL4	EIF5B	ESR1	FAS	FASLG	FOXO1	GAA	GADD45A	GALNT5	GRB2	HSPBAP1
E	HTT	IFNG	IGF1	IGF1R	INS	IRGM	JPH3	KCNIP1	MAG	MAP1LC3A	MAPK8	MCL1
F	NFKB1	NOL3	OR10J3	PARP1	PARP2	PIK3C3	PVR	RAB25	RPS6KB1	S100A7A	SNCA	SPATA2
G	SQSTM1	SYCP2	MACO1	TNF	TNFRSF10A	TNFRSF11B	TNFRSF1A	TP53	TRAF2	TXNL4B	ULK1	XIAP
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	UPFH1132770	ENST00000318560.6	ABL1	ENSG00000097007	ABL proto-oncogene 1, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 76
A02	UPFH0453992	ENST0000055528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
A03	UPFH1132235	ENST00000551964.5	APAF1	ENSG00000120868	apoptotic peptidase activating factor 1 Source HGNC Symbol Acc HGNC 576
A04	UPFH1132238	ENST00000346798.8	APP	ENSG00000142192	amyloid beta precursor protein Source HGNC Symbol Acc HGNC 620
A05	UPFH0095132	ENST00000513322.5	ATG12	ENSG00000145782	autophagy related 12 Source HGNC Symbol Acc HGNC 588
A06	UPFH0012337	ENST00000392021.7	ATG16L1	ENSG00000085978	autophagy related 16 like 1 Source HGNC Symbol Acc HGNC 21498
A07	UPFH0544689	ENST00000283290.9	ATG3	ENSG00000144848	autophagy related 3 Source HGNC Symbol Acc HGNC 20962
A08	UPFH1132251	ENST00000635758.2	ATG5	ENSG00000057663	autophagy related 5 Source HGNC Symbol Acc HGNC 589
A09	UPFH0133269	ENST00000354449.7	ATG7	ENSG00000197548	autophagy related 7 Source HGNC Symbol Acc HGNC 16935
A10	UPFH0064740	ENST00000415099.2	ATP6V1G2	ENSG00000213760	ATPase H+ transporting V1 subunit G2 Source HGNC Symbol Acc HGNC 862
A11	UPFH0540159	ENST00000293288.12	BAX	ENSG00000087088	BCL2 associated X, apoptosis regulator Source HGNC Symbol Acc HGNC 959
A12	UPFH1132900	ENST00000333681.5	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
B01	UPFH1132270	ENST00000335661.6	BCL2A1	ENSG00000140379	BCL2 related protein A1 Source HGNC Symbol Acc HGNC 991
B02	UPFH1132271	ENST00000376062.6	BCL2L1	ENSG00000171552	BCL2 like 1 Source HGNC Symbol Acc HGNC 992
B03	UPFH1172900	ENST00000308659.12	BCL2L11	ENSG00000153094	BCL2 like 11 Source HGNC Symbol Acc HGNC 994
B04	UPFH0102826	ENST00000361523.8	BECN1	ENSG00000126581	beclin 1 Source HGNC Symbol Acc HGNC 1034
B05	UPFH0351057	ENST00000227758.6	BIRC2	ENSG00000110330	baculoviral IAP repeat containing 2 Source HGNC Symbol Acc HGNC 590
B06	UPFH0113281	ENST00000615299.4	BIRC3	ENSG00000023445	baculoviral IAP repeat containing 3 Source HGNC Symbol Acc HGNC 591
B07	UPFH0520627	ENST00000431415.3	BMF	ENSG00000104081	Bcl2 modifying factor Source HGNC Symbol Acc HGNC 24132
B08	UPFH0232425	ENST00000379320.5	C1orf159	ENSG00000131591	chromosome 1 open reading frame 159 Source HGNC Symbol Acc HGNC 26062
B09	UPFH0285144	ENST00000436863.7	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
B10	UPFH0459272	ENST00000350623.7	CASP2	ENSG00000106144	caspase 2 Source HGNC Symbol Acc HGNC 1503
B11	UPFH1132892	ENST00000523916.5	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B12	UPFH0298502	ENST00000352981.7	CASP6	ENSG00000138794	caspase 6 Source HGNC Symbol Acc HGNC 1507
C01	UPFH0495219	ENST00000369318.7	CASP7	ENSG00000165806	caspase 7 Source HGNC Symbol Acc HGNC 1508
C02	UPFH0083593	ENST00000440484.1	CASP9	ENSG00000132906	caspase 9 Source HGNC Symbol Acc HGNC 1511
C03	UPFH0237552	ENST00000410006.6	CCDC103	ENSG00000167131	coiled-coil domain containing 103 Source HGNC Symbol Acc HGNC 32700
C04	UPFH0317626	ENST00000372285.7	CD40	ENSG00000101017	CD40 molecule Source HGNC Symbol Acc HGNC 11919
C05	UPFH0592498	ENST00000370629.6	CD40LG	ENSG00000102245	CD40 ligand Source HGNC Symbol Acc HGNC 11935
C06	UPFH1132312	ENST00000479953.6	CFLAR	ENSG00000003402	CASP8 and FADD like apoptosis regulator Source HGNC Symbol Acc HGNC 1876
C07	UPFH0282408	ENST00000564815.5	COMMD4	ENSG00000140365	COMM domain containing 4 Source HGNC Symbol Acc HGNC 26027
C08	UPFH1132795	ENST00000345125.7	CTSB	ENSG00000164733	cathepsin B Source HGNC Symbol Acc HGNC 2527
C09	UPFH1132344	ENST00000368985.8	CTSS	ENSG00000163131	cathepsin S Source HGNC Symbol Acc HGNC 2545
C10	UPFH0025683	ENST00000311559.13	CYLD	ENSG00000083799	CYLD lysine 63 deubiquitinase Source HGNC Symbol Acc HGNC 2584
		ENST00000297		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0256759	439.4	DEFB1	164825	defensin beta 1 Source HGNC Symbol Acc HGNC 2766
C12	UPFH0345459	ENST00000635620.1	DENND4A	ENSG00000174485	DENN domain containing 4A Source HGNC Symbol Acc HGNC 24321
D01	UPFH1132358	ENST00000377036.2	DFFA	ENSG00000160049	DNA fragmentation factor subunit alpha Source HGNC Symbol Acc HGNC 2772
D02	UPFH0109303	ENST00000471544.1	DPYSL4	ENSG00000151640	dihydropyrimidinase like 4 Source HGNC Symbol Acc HGNC 3016
D03	UPFH0140244	ENST00000289371.11	EIF5B	ENSG00000158417	eukaryotic translation initiation factor 5B Source HGNC Symbol Acc HGNC 30793
D04	UPFH0599047	ENST00000206249.7	ESR1	ENSG00000091831	estrogen receptor 1 Source HGNC Symbol Acc HGNC 3467
D05	UPFH1132395	ENST00000357339.6	FAS	ENSG00000026103	Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920
D06	UPFH1132396	ENST00000367721.3	FASLG	ENSG00000117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
D07	UPFH0204878	ENST00000449804.4	FOXO1	ENSG00000168269	forkhead box O1 Source HGNC Symbol Acc HGNC 3815
D08	UPFH1132409	ENST00000570803.5	GAA	ENSG00000171298	glucosidase alpha, acid Source HGNC Symbol Acc HGNC 4065
D09	UPFH1132413	ENST00000370985.4	GADD45A	ENSG00000116717	growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095
D10	UPFH0495936	ENST00000259056.5	GALNT5	ENSG00000136542	polypeptide N-acetylgalactosaminyltransferase 5 Source HGNC Symbol Acc HGNC 4127
D11	UPFH1132426	ENST00000392564.5	GRB2	ENSG00000177885	growth factor receptor bound protein 2 Source HGNC Symbol Acc HGNC 4566
D12	UPFH0084399	ENST00000467643.5	HSPBAP1	ENSG00000169087	HSPB1 associated protein 1 Source HGNC Symbol Acc HGNC 16389
E01	UPFH0432604	ENST00000355072.10	HTT	ENSG00000197386	huntingtin Source HGNC Symbol Acc HGNC 4851
E02	UPFH1132473	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
E03	UPFH0229443	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
E04	UPFH0237955	ENST00000650285.1	IGF1R	ENSG00000140443	insulin like growth factor 1 receptor Source HGNC Symbol Acc HGNC 5465
E05	UPFH1132488	ENST00000381330.4	INS	ENSG00000025467	insulin Source HGNC Symbol Acc HGNC 6081
E06	UPFH0069624	ENST00000522154.1	IRGM	ENSG000000237693	immunity related GTPase M Source HGNC Symbol Acc HGNC 29597
E07	UPFH0096318	ENST00000537256.5	JPH3	ENSG00000154118	junctional protein 3 Source HGNC Symbol Acc HGNC 14203
E08	UPFH0584507	ENST00000434108.5	KCNIP1	ENSG00000182132	potassium voltage-gated channel interacting protein 1 Source HGNC Symbol Acc HGNC 15521
E09	UPFH0265574	ENST00000595791.5	MAG	ENSG00000105695	myelin associated glycoprotein Source HGNC Symbol Acc HGNC 6783
E10	UPFH0546028	ENST00000374837.7	MAP1LC3A	ENSG00000101460	microtubule associated protein 1 light chain 3 alpha Source HGNC Symbol Acc HGNC 6838
E11	UPFH1132535	ENST00000374179.8	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
E12	UPFH1132538	ENST00000369026.3	MCL1	ENSG00000143384	MCL1, BCL2 family apoptosis regulator Source HGNC Symbol Acc HGNC 6943
F01	UPFH1132828	ENST00000226574.9	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
F02	UPFH0321828	ENST00000564053.5	NOL3	ENSG00000140939	nucleolar protein 3 Source NCBI gene Acc 8996
F03	UPFH0488504	ENST00000649616.1	OR10J3	ENSG00000196266	olfactory receptor family 10 subfamily J member 3 Source HGNC Symbol Acc HGNC 14992
F04	UPFH0203594	ENST00000490921.5	PARP1	ENSG00000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
F05	UPFH0154861	ENST00000527915.5	PARP2	ENSG00000129484	poly(ADP-ribose) polymerase 2 Source HGNC Symbol Acc HGNC 272
F06	UPFH1132623	ENST00000262039.9	PIK3C3	ENSG00000078142	phosphatidylinositol 3-kinase catalytic subunit type 3 Source HGNC Symbol Acc HGNC 8974
F07	UPFH1132644	ENST00000403059.8	PVR	ENSG00000073008	poliovirus receptor Source HGNC Symbol Acc HGNC 9705
F08	UPFH0471247	ENST00000361084.10	RAB25	ENSG00000132698	RAB25, member RAS oncogene family Source HGNC Symbol Acc HGNC 18238
F09	UPFH1132665	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
F10	UPFH0602044	ENST00000368728.2	S100A7A	ENSG00000184330	S100 calcium binding protein A7A Source HGNC Symbol Acc HGNC 21657

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0584453	ENST00000394991.7	SNCA	ENSG00000145335	synuclein alpha Source HGNC Symbol Acc HGNC 11138
F12	UPFH0337304	ENST00000422556.1	SPATA2	ENSG00000158480	spermatogenesis associated 2 Source HGNC Symbol Acc HGNC 14681
G01	UPFH1132695	ENST00000510187.5	SQSTM1	ENSG00000161011	sequestosome 1 Source HGNC Symbol Acc HGNC 11280
G02	UPFH0339147	ENST00000357552.8	SYCP2	ENSG00000196074	synaptonemal complex protein 2 Source HGNC Symbol Acc HGNC 11490
G03	UPFH0616177	ENST00000374343.5	MACO1	ENSG00000204178	macoilin 1 Source HGNC Symbol Acc HGNC 25572
G04	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G05	UPFH1132888	ENST00000524158.5	TNFRSF10A	ENSG00000104689	TNF receptor superfamily member 10a Source HGNC Symbol Acc HGNC 11904
G06	UPFH1132851	ENST00000297350.9	TNFRSF11B	ENSG00000164761	TNF receptor superfamily member 11b Source HGNC Symbol Acc HGNC 11909
G07	UPFH1132732	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G08	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G09	UPFH1132855	ENST00000247668.7	TRAF2	ENSG00000127191	TNF receptor associated factor 2 Source HGNC Symbol Acc HGNC 12032
G10	UPFH1132745	ENST00000426362.6	TXNL4B	ENSG00000140830	thioredoxin like 4B Source HGNC Symbol Acc HGNC 26041
G11	UPFH1132747	ENST00000321867.6	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1 Source HGNC Symbol Acc HGNC 12558
G12	UPFH0572864	ENST00000371199.7	XIAP	ENSG00000101966	X-linked inhibitor of apoptosis Source HGNC Symbol Acc HGNC 592
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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