

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

## Human Cell Death PathwayFinder

Cat. no. 249950 SBHS-212ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System 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	HIT	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 PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH1219716	ENST00000372348.6	ABL1	ENSG00000097007	ABL proto-oncogene 1, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 76
A02	SBH0095396	ENST00000555528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
A03	SBH1219745	ENST00000359972.6	APAF1	ENSG00000120868	apoptotic peptidase activating factor 1 Source HGNC Symbol Acc HGNC 576
A04	SBH1219749	ENST00000348990.9	APP	ENSG00000142192	amyloid beta precursor protein Source HGNC Symbol Acc HGNC 620
A05	SBH0047443	ENST00000513322.5	ATG12	ENSG00000145782	autophagy related 12 Source HGNC Symbol Acc HGNC 588
A06	SBH0591150	ENST00000392020.8	ATG16L1	ENSG00000085978	autophagy related 16 like 1 Source HGNC Symbol Acc HGNC 21498
A07	SBH0131023	ENST00000283290.9	ATG3	ENSG00000144848	autophagy related 3 Source HGNC Symbol Acc HGNC 20962
A08	SBH1219760	ENST00000636437.1	ATG5	ENSG00000057663	autophagy related 5 Source HGNC Symbol Acc HGNC 589
A09	SBH1219761	ENST00000354956.9	ATG7	ENSG00000197548	autophagy related 7 Source HGNC Symbol Acc HGNC 16935
A10	SBH0108984	ENST00000483251.1	ATP6V1G2	ENSG00000213760	ATPase H+ transporting V1 subunit G2 Source HGNC Symbol Acc HGNC 862
A11	SBH1219783	ENST00000391871.4	BAX	ENSG00000087088	BCL2 associated X, apoptosis regulator Source HGNC Symbol Acc HGNC 959
A12	SBH1219786	ENST00000398117.1	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
B01	SBH1219787	ENST00000267953.4	BCL2A1	ENSG00000140379	BCL2 related protein A1 Source HGNC Symbol Acc HGNC 991
B02	SBH0216029	ENST00000450273.1	BCL2L1	ENSG00000171552	BCL2 like 1 Source HGNC Symbol Acc HGNC 992
B03	SBH0393547	ENST00000308659.12	BCL2L11	ENSG00000153094	BCL2 like 11 Source HGNC Symbol Acc HGNC 994
B04	SBH0399911	ENST00000361523.8	BECN1	ENSG00000126581	beclin 1 Source HGNC Symbol Acc HGNC 1034
B05	SBH1219795	ENST00000530675.5	BIRC2	ENSG00000110330	baculoviral IAP repeat containing 2 Source HGNC Symbol Acc HGNC 590
B06	SBH1219796	ENST00000263464.8	BIRC3	ENSG00000023445	baculoviral IAP repeat containing 3 Source HGNC Symbol Acc HGNC 591
B07	SBH0106821	ENST00000559701.5	BMF	ENSG00000104081	Bcl2 modifying factor Source HGNC Symbol Acc HGNC 24132
B08	SBH0450125	ENST00000379319.5	C1orf159	ENSG00000131591	chromosome 1 open reading frame 159 Source HGNC Symbol Acc HGNC 26062
B09	SBH0054226	ENST00000526568.5	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
B10	SBH0250948	ENST00000310447.10	CASP2	ENSG00000106144	caspase 2 Source HGNC Symbol Acc HGNC 1503
B11	SBH1219824	ENST00000308394.9	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B12	SBH1219827	ENST00000352981.7	CASP6	ENSG00000138794	caspase 6 Source HGNC Symbol Acc HGNC 1507
C01	SBH0425413	ENST00000369318.7	CASP7	ENSG00000165806	caspase 7 Source HGNC Symbol Acc HGNC 1508
C02	SBH1219828	ENST00000333868.10	CASP9	ENSG00000132906	caspase 9 Source HGNC Symbol Acc HGNC 1511
C03	SBH0096346	ENST00000410006.6	CCDC103	ENSG00000167131	coiled-coil domain containing 103 Source HGNC Symbol Acc HGNC 32700
C04	SBH1219861	ENST00000372285.7	CD40	ENSG00000101017	CD40 molecule Source HGNC Symbol Acc HGNC 11919
C05	SBH1219862	ENST00000370629.6	CD40LG	ENSG00000102245	CD40 ligand Source HGNC Symbol Acc HGNC 11935
C06	SBH1219883	ENST00000462763.5	CFLAR	ENSG00000003402	CASP8 and FADD like apoptosis regulator Source HGNC Symbol Acc HGNC 1876
C07	SBH0095247	ENST0000056877.5	COMMD4	ENSG00000140365	COMM domain containing 4 Source HGNC Symbol Acc HGNC 26027
C08	SBH1219921	ENST00000534510.5	CTSB	ENSG00000164733	cathepsin B Source HGNC Symbol Acc HGNC 2527
C09	SBH1219923	ENST00000448301.6	CTSS	ENSG00000163131	cathepsin S Source HGNC Symbol Acc HGNC 2545
C10	SBH0059638	ENST00000311559.13	CYLD	ENSG00000083799	CYLD lysine 63 deubiquitinase Source HGNC Symbol Acc HGNC 2584
		ENST00000297		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0539865	439.4	DEFB1	164825	defensin beta 1 Source HGNC Symbol Acc HGNC 2766
C12	SBH0589780	ENST00000431932.6	DENND4A	ENSG00000174485	DENN domain containing 4A Source HGNC Symbol Acc HGNC 24321
D01	SBH1219946	ENST00000377036.2	DFFA	ENSG00000160049	DNA fragmentation factor subunit alpha Source HGNC Symbol Acc HGNC 2772
D02	SBH0377213	ENST00000338492.9	DPYSL4	ENSG00000151640	dihydropyrimidinase like 4 Source HGNC Symbol Acc HGNC 3016
D03	SBH0282447	ENST00000289371.11	EIF5B	ENSG00000158417	eukaryotic translation initiation factor 5B Source HGNC Symbol Acc HGNC 30793
D04	SBH0125383	ENST00000206249.7	ESR1	ENSG00000091831	estrogen receptor 1 Source HGNC Symbol Acc HGNC 3467
D05	SBH1219994	ENST00000652046.1	FAS	ENSG00000026103	Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920
D06	SBH1219995	ENST00000367721.3	FASLG	ENSG00000117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
D07	SBH0321983	ENST00000306268.8	FOX1	ENSG00000168269	forkhead box I1 Source HGNC Symbol Acc HGNC 3815
D08	SBH1220015	ENST00000302262.8	GAA	ENSG00000171298	glucosidase alpha, acid Source HGNC Symbol Acc HGNC 4065
D09	SBH1220019	ENST00000370985.4	GADD45A	ENSG00000116717	growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095
D10	SBH0254571	ENST00000259056.5	GALNT5	ENSG00000136542	polypeptide N-acetylgalactosaminyltransferase 5 Source HGNC Symbol Acc HGNC 4127
D11	SBH1220038	ENST00000392563.5	GRB2	ENSG00000177885	growth factor receptor bound protein 2 Source HGNC Symbol Acc HGNC 4566
D12	SBH0622184	ENST00000467643.5	HSPBAP1	ENSG00000169087	HSPB1 associated protein 1 Source HGNC Symbol Acc HGNC 16389
E01	SBH0068070	ENST00000355072.10	HTT	ENSG00000197386	huntingtin Source HGNC Symbol Acc HGNC 4851
E02	SBH1220090	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
E03	SBH1220091	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
E04	SBH0201042	ENST00000650285.1	IGF1R	ENSG00000140443	insulin like growth factor 1 receptor Source HGNC Symbol Acc HGNC 5465
E05	SBH0403664	ENST00000250971.7	INS	ENSG00000254647	insulin Source HGNC Symbol Acc HGNC 6081
E06	SBH1220127	ENST00000522154.1	IRGM	ENSG00000237693	immunity related GTPase M Source HGNC Symbol Acc HGNC 29597
E07	SBH0489202	ENST00000563609.1	JPH3	ENSG00000154118	junctophilin 3 Source HGNC Symbol Acc HGNC 14203
E08	SBH0361360	ENST00000390656.8	KCNIP1	ENSG00000182132	potassium voltage-gated channel interacting protein 1 Source HGNC Symbol Acc HGNC 15521
E09	SBH0470148	ENST00000392213.8	MAG	ENSG00000105695	myelin associated glycoprotein Source HGNC Symbol Acc HGNC 6783
E10	SBH0164958	ENST00000397709.1	MAP1LC3A	ENSG00000101460	microtubule associated protein 1 light chain 3 alpha Source HGNC Symbol Acc HGNC 6838
E11	SBH0294318	ENST00000395611.7	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
E12	SBH1220199	ENST00000620947.4	MCL1	ENSG00000143384	MCL1, BCL2 family apoptosis regulator Source HGNC Symbol Acc HGNC 6943
F01	SBH1220264	ENST00000651197.1	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
F02	SBH0116684	ENST00000268605.11	NOL3	ENSG00000140939	nucleolar protein 3 Source NCBI gene Acc 8996
F03	SBH0136093	ENST00000649616.1	OR10J3	ENSG00000196266	olfactory receptor family 10 subfamily J member 3 Source HGNC Symbol Acc HGNC 14992
F04	SBH1220289	ENST00000366794.10	PARP1	ENSG00000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
F05	SBH0568522	ENST00000250416.9	PARP2	ENSG00000129484	poly(ADP-ribose) polymerase 2 Source HGNC Symbol Acc HGNC 272
F06	SBH1220312	ENST00000639914.1	PIK3C3	ENSG00000078142	phosphatidylinositol 3-kinase catalytic subunit type 3 Source HGNC Symbol Acc HGNC 8974
F07	SBH1220346	ENST00000403059.8	PVR	ENSG00000073008	poliovirus receptor Source HGNC Symbol Acc HGNC 9705
F08	SBH0546015	ENST00000497968.1	RAB25	ENSG00000132698	RAB25, member RAS oncogene family Source HGNC Symbol Acc HGNC 18238
F09	SBH1220379	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
F10	SBH0368657	ENST00000329256.2	S100A7A	ENSG00000184330	S100 calcium binding protein A7A Source HGNC Symbol Acc HGNC 21657

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0118819	ENST00000394991.7	SNCA	ENSG00000145335	synuclein alpha Source HGNC Symbol Acc HGNC 11138
F12	SBH0388314	ENST00000289431.10	SPATA2	ENSG00000158480	spermatogenesis associated 2 Source HGNC Symbol Acc HGNC 14681
G01	SBH0567619	ENST00000466342.1	SQSTM1	ENSG00000161011	sequestosome 1 Source HGNC Symbol Acc HGNC 11280
G02	SBH0212598	ENST00000471331.1	SYCP2	ENSG00000196074	synaptonemal complex protein 2 Source HGNC Symbol Acc HGNC 11490
G03	SBH0244766	ENST00000647928.1	MACO1	ENSG00000204178	macoilin 1 Source HGNC Symbol Acc HGNC 25572
G04	SBH1220471	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G05	SBH1220472	ENST00000221132.7	TNFRSF10A	ENSG00000104689	TNF receptor superfamily member 10a Source HGNC Symbol Acc HGNC 11904
G06	SBH1220474	ENST00000297350.9	TNFRSF11B	ENSG00000164751	TNF receptor superfamily member 11b Source HGNC Symbol Acc HGNC 11909
G07	SBH0080951	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G08	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G09	SBH1220492	ENST00000247668.7	TRAF2	ENSG00000127191	TNF receptor associated factor 2 Source HGNC Symbol Acc HGNC 12032
G10	SBH1220498	ENST00000268483.8	TXNL4B	ENSG00000140830	thioredoxin like 4B Source HGNC Symbol Acc HGNC 26041
G11	SBH1220504	ENST00000321867.6	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1 Source HGNC Symbol Acc HGNC 12558
G12	SBH1220539	ENST00000434753.7	XIAP	ENSG00000101966	X-linked inhibitor of apoptosis Source HGNC Symbol Acc HGNC 592
H01	SBH1220543	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	SBH1220550	ENST00000558401.6	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	SBH1220545	ENST00000396861.5	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	SBH1220546	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	SBH1220553	ENST00000546989.5	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	SBH1218553	Sybr_HGDC	HGDC	Sybr_HGDC	Human Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
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 SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green 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	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208052

\*Larger kit sizes available.

The QuantiNova LNA 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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