

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

## Human Cancer PathwayFinder™

Cat. no. 249950 SBHS-033ZA

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	ACLY	ACSL4	ADM	ANGPT1	ANGPT2	APAF1	ARNT	ATP5F1A	AURKA	BCL2L11	BIRC3	BMI1
B	CA9	CASP2	CASP7	CASP9	CCL2	CCND2	CCND3	CDC20	CDH2	CFLAR	COX5A	CPT2
C	DDB2	DDIT3	DKC1	DSP	E2F4	EPO	ERCC3	ERCC5	ETS2	FASLG	FGF2	FLT1
D	FOXO2	G6PD	GADD45G	GPD2	GSC	HMOX1	IGFBP3	IGFBP5	IGFBP7	KDR	KRT14	LDHA
E	LIG4	LPL	MAP2K1	MAP2K3	MAPK14	MCM2	MKI67	NOL3	OCLN	PFKL	PGF	PINX1
F	POLB	PPP1R15A	SERPINB2	SERPINF1	SKP2	SLC2A1	SNAI1	SNAI2	SNAI3	SOD1	SOX10	STMN1
G	TBX2	TEK	TEP1	TERF1	TERF2IP	TINF2	TNKS	TNKS2	UQCRCF51	VEGFC	WEE1	XIAP
H	ACTB	B2M	GAPDH	HRPT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH1219718	ENST00000590770.5	ACLY	ENSG00000131473	ATP citrate lyase Source HGNC Symbol Acc HGNC 115
A02	SBH0030689	ENST000003348502.10	ACSL4	ENSG00000068366	acyl-CoA synthetase long chain family member 4 Source HGNC Symbol Acc HGNC 3571
A03	SBH1219728	ENST00000525063.2	ADM	ENSG00000148926	adrenomedullin Source HGNC Symbol Acc HGNC 259
A04	SBH1219739	ENST00000520734.5	ANGPT1	ENSG00000154188	angiopoietin 1 Source HGNC Symbol Acc HGNC 484
A05	SBH1219740	ENST00000338312.10	ANGPT2	ENSG00000091879	angiopoietin 2 Source HGNC Symbol Acc HGNC 485
A06	SBH1219745	ENST00000335972.6	APAF1	ENSG00000120868	apoptotic peptidase activating factor 1 Source HGNC Symbol Acc HGNC 576
A07	SBH1219751	ENST000003358595.10	ARNT	ENSG00000143437	aryl hydrocarbon receptor nuclear translocator Source HGNC Symbol Acc HGNC 700
A08	SBH1219765	ENST00000590665.5	ATP5F1A	ENSG00000152234	ATP synthase F1 subunit alpha Source HGNC Symbol Acc HGNC 823
A09	SBH0360632	ENST00000441357.5	AURKA	ENSG00000087586	aurora kinase A Source HGNC Symbol Acc HGNC 11393
A10	SBH0393547	ENST00000308659.12	BCL2L11	ENSG00000153094	BCL2 like 11 Source HGNC Symbol Acc HGNC 994
A11	SBH1219796	ENST00000263464.8	BIRC3	ENSG00000023445	baculoviral IAP repeat containing 3 Source HGNC Symbol Acc HGNC 591
A12	SBH1219800	ENST000003376663.8	BMI1	ENSG00000168283	BMI1 proto-oncogene, polycomb ring finger Source HGNC Symbol Acc HGNC 1066
B01	SBH1219820	ENST000003378357.9	CA9	ENSG00000107159	carbonic anhydrase 9 Source HGNC Symbol Acc HGNC 1383
B02	SBH0250948	ENST000003310447.10	CASP2	ENSG00000106144	caspase 2 Source HGNC Symbol Acc HGNC 1503
B03	SBH0425413	ENST000003369318.7	CASP7	ENSG00000165806	caspase 7 Source HGNC Symbol Acc HGNC 1508
B04	SBH1219828	ENST00000333868.10	CASP9	ENSG00000132906	caspase 9 Source HGNC Symbol Acc HGNC 1511
B05	SBH0228134	ENST00000225831.4	CCL2	ENSG00000108691	C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618
B06	SBH1219845	ENST00000261254.8	CCND2	ENSG00000118971	cyclin D2 Source HGNC Symbol Acc HGNC 1583
B07	SBH0542733	ENST000003372991.8	CCND3	ENSG00000112576	cyclin D3 Source HGNC Symbol Acc HGNC 1585
B08	SBH1219865	ENST000003310955.11	CDC20	ENSG00000117399	cell division cycle 20 Source HGNC Symbol Acc HGNC 1723
B09	SBH1219870	ENST00000269141.8	CDH2	ENSG00000170558	cadherin 2 Source HGNC Symbol Acc HGNC 1759
B10	SBH1219883	ENST00000462763.5	CFLAR	ENSG00000003402	CASP8 and FADD like apoptosis regulator Source HGNC Symbol Acc HGNC 1876
B11	SBH1219902	ENST000003322347.11	COX5A	ENSG00000178741	cytochrome c oxidase subunit 5A Source HGNC Symbol Acc HGNC 2267
B12	SBH1219910	ENST00000636891.1	CPT2	ENSG00000157184	carnitine palmitoyltransferase 2 Source HGNC Symbol Acc HGNC 2330
C01	SBH0176071	ENST00000256996.8	DDB2	ENSG00000134574	damage specific DNA binding protein 2 Source HGNC Symbol Acc HGNC 2718
C02	SBH0602366	ENST000003346473.7	DDIT3	ENSG00000175197	DNA damage inducible transcript 3 Source HGNC Symbol Acc HGNC 2726
C03	SBH1219951	ENST000003369550.10	DKC1	ENSG00000130826	dyskerin pseudouridine synthase 1 Source HGNC Symbol Acc HGNC 2890
C04	SBH1219960	ENST000003379802.8	DSP	ENSG00000096696	desmoplakin Source HGNC Symbol Acc HGNC 3052
C05	SBH1219966	ENST000003379378.8	E2F4	ENSG00000205250	E2F transcription factor 4 Source HGNC Symbol Acc HGNC 3118
C06	SBH1219979	ENST00000252723.3	EPO	ENSG00000130427	erythropoietin Source HGNC Symbol Acc HGNC 3415
C07	SBH0595209	ENST00000285398.6	ERCC3	ENSG00000163161	ERCC excision repair 3, TFIIH core complex helicase subunit Source HGNC Symbol Acc HGNC 3435
C08	SBH1219984	ENST00000652225.1	ERCC5	ENSG00000134899	ERCC excision repair 5, endonuclease Source HGNC Symbol Acc HGNC 3437
C09	SBH1219986	ENST00000432278.5	ETS2	ENSG00000157557	ETS proto-oncogene 2, transcription factor Source HGNC Symbol Acc HGNC 3489
C10	SBH1219995	ENST000003367721.3	FASLG	ENSG00000117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
		ENST00000264		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220000	498.7	FGF2	138685	fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676
C12	SBH1220002	ENST00000282397.9	FLT1	ENSG00000102755	fms related tyrosine kinase 1 Source HGNC Symbol Acc HGNC 3763
D01	SBH1220006	ENST00000320354.6	FOXC2	ENSG00000176692	forkhead box C2 Source HGNC Symbol Acc HGNC 3801
D02	SBH0586368	ENST00000621232.5	G6PD	ENSG00000160211	glucose-6-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4057
D03	SBH1220021	ENST00000252506.11	GADD45G	ENSG00000130222	growth arrest and DNA damage inducible gamma Source HGNC Symbol Acc HGNC 4097
D04	SBH1220030	ENST00000409674.5	GPD2	ENSG00000115159	glycerol-3-phosphate dehydrogenase 2 Source HGNC Symbol Acc HGNC 4456
D05	SBH1220040	ENST00000238558.4	GSC	ENSG00000133937	goosecoid homeobox Source HGNC Symbol Acc HGNC 4612
D06	SBH1220067	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
D07	SBH1220092	ENST00000275521.10	IGFBP3	ENSG00000146674	insulin like growth factor binding protein 3 Source HGNC Symbol Acc HGNC 5472
D08	SBH1220094	ENST00000233813.5	IGFBP5	ENSG00000115461	insulin like growth factor binding protein 5 Source HGNC Symbol Acc HGNC 5474
D09	SBH0069319	ENST00000295666.6	IGFBP7	ENSG00000163453	insulin like growth factor binding protein 7 Source HGNC Symbol Acc HGNC 5476
D10	SBH0020198	ENST00000263923.5	KDR	ENSG00000128052	kinase insert domain receptor Source HGNC Symbol Acc HGNC 6307
D11	SBH1220158	ENST00000167586.7	KRT14	ENSG00000186847	keratin 14 Source HGNC Symbol Acc HGNC 6416
D12	SBH1225370	ENST00000540430.5	LDHA	ENSG00000134333	lactate dehydrogenase A Source HGNC Symbol Acc HGNC 6535
E01	SBH0437738	ENST000003356922.5	LIG4	ENSG00000174405	DNA ligase 4 Source HGNC Symbol Acc HGNC 6601
E02	SBH1220175	ENST00000311322.10	LPL	ENSG00000175445	lipoprotein lipase Source HGNC Symbol Acc HGNC 6677
E03	SBH0671782	ENST00000307102.9	MAP2K1	ENSG00000169032	mitogen-activated protein kinase kinase 1 Source HGNC Symbol Acc HGNC 6840
E04	SBH1220188	ENST00000613338.4	MAP2K3	ENSG00000034152	mitogen-activated protein kinase kinase 3 Source HGNC Symbol Acc HGNC 6843
E05	SBH0102441	ENST00000229795.7	MAPK14	ENSG00000112062	mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876
E06	SBH1220200	ENST00000491422.1	MCM2	ENSG00000073111	minichromosome maintenance complex component 2 Source HGNC Symbol Acc HGNC 6944
E07	SBH1220213	ENST000003368654.8	MKI67	ENSG00000148773	marker of proliferation Ki-67 Source HGNC Symbol Acc HGNC 7107
E08	SBH0116684	ENST00000268605.11	NOL3	ENSG00000140939	nucleolar protein 3 Source NCBI gene Acc 8996
E09	SBH1220284	ENST000003355237.6	OCLN	ENSG00000197822	occludin Source HGNC Symbol Acc HGNC 8104
E10	SBH1220301	ENST000003349048.9	PFKL	ENSG00000141959	phosphofruktokinase, liver type Source HGNC Symbol Acc HGNC 8876
E11	SBH1220303	ENST00000238607.10	PGF	ENSG00000119630	placental growth factor Source HGNC Symbol Acc HGNC 8893
E12	SBH1220548	ENST00000519088.5	PINX1	ENSG00000254093	PIN2 (TERF1) interacting telomerase inhibitor 1 Source HGNC Symbol Acc HGNC 30046
F01	SBH1220319	ENST00000265421.9	POLB	ENSG00000070501	DNA polymerase beta Source HGNC Symbol Acc HGNC 9174
F02	SBH1220326	ENST00000200453.6	PPP1R15A	ENSG00000087074	protein phosphatase 1 regulatory subunit 15A Source HGNC Symbol Acc HGNC 14375
F03	SBH1220388	ENST00000404622.5	SERPINB2	ENSG00000197632	serpin family B member 2 Source HGNC Symbol Acc HGNC 8584
F04	SBH1220390	ENST00000254722.9	SERPINF1	ENSG00000132386	serpin family F member 1 Source HGNC Symbol Acc HGNC 8824
F05	SBH1220400	ENST00000274254.9	SKP2	ENSG00000145604	S-phase kinase associated protein 2 Source HGNC Symbol Acc HGNC 10901
F06	SBH0102394	ENST00000426263.8	SLC2A1	ENSG00000117394	solute carrier family 2 member 1 Source HGNC Symbol Acc HGNC 11005
F07	SBH1220409	ENST00000244050.3	SNAI1	ENSG00000124216	snail family transcriptional repressor 1 Source HGNC Symbol Acc HGNC 11128
F08	SBH1220410	ENST00000642303.1	SNAI2	ENSG00000019549	snail family transcriptional repressor 2 Source HGNC Symbol Acc HGNC 11094
F09	SBH1220411	ENST00000332281.6	SNAI3	ENSG00000185669	snail family transcriptional repressor 3 Source NCBI gene Acc 333929
F10	SBH0278498	ENST00000270142.10	SOD1	ENSG00000142168	superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH1220416	ENST00000360880.6	SOX10	ENSG00000100146	SRY-box 10 Source HGNC Symbol Acc HGNC 11190
F12	SBH1220427	ENST00000426559.6	STMN1	ENSG00000117632	stathmin 1 Source HGNC Symbol Acc HGNC 6510
G01	SBH1220434	ENST00000240328.4	TBX2	ENSG00000121068	T-box 2 Source HGNC Symbol Acc HGNC 11597
G02	SBH1220437	ENST00000380036.9	TEK	ENSG00000120156	TEK receptor tyrosine kinase Source HGNC Symbol Acc HGNC 11724
G03	SBH1220438	ENST00000556935.5	TEP1	ENSG00000129566	telomerase associated protein 1 Source HGNC Symbol Acc HGNC 11726
G04	SBH1220439	ENST00000276603.10	TERF1	ENSG00000147601	telomeric repeat binding factor 1 Source HGNC Symbol Acc HGNC 11728
G05	SBH0277729	ENST00000300086.5	TERF2IP	ENSG00000166848	TERF2 interacting protein Source HGNC Symbol Acc HGNC 19246
G06	SBH0207369	ENST00000399423.8	TINF2	ENSG00000092330	TERF1 interacting nuclear factor 2 Source HGNC Symbol Acc HGNC 11824
G07	SBH1220482	ENST00000310430.11	TNKS	ENSG00000173273	tankyrase Source HGNC Symbol Acc HGNC 11941
G08	SBH1220483	ENST00000371627.5	TNKS2	ENSG00000107854	tankyrase 2 Source HGNC Symbol Acc HGNC 15677
G09	SBH1220509	ENST00000304863.6	UQCRCF1	ENSG00000169021	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 Source HGNC Symbol Acc HGNC 12587
G10	SBH1220517	ENST00000618562.2	VEGFC	ENSG00000150630	vascular endothelial growth factor C Source HGNC Symbol Acc HGNC 12682
G11	SBH1220523	ENST00000450114.7	WEE1	ENSG00000166483	WEE1 G2 checkpoint kinase Source HGNC Symbol Acc HGNC 12761
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.

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.