QuantiNova® LNA® PCR Focus Panels (Rotor-Gene® Format)

Human Oncogenes & Tumor Suppressor Genes

Cat. no. 249950 SBHS-502ZR

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 (Rotor-Gene): QuantiNova LNA PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. Refer to the QuantiNova LNA PCR System Handbook at **www.qiagen.com** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ABL1	AKT1	APC	ATM	BAX	BCL2	BCL2L1	BCR	BRCA1	BRCA2	CASP8	CCND1
B	CDH1	CDK4	CDKN1A	CDKN2A	CDKN2B	CDKN3	CTNNB1	E2F1	EGF	ELK1	ERBB2	ESR1
C	ETS1	FHIT	FOS	FOXD3	HGF	HIC1	HRAS	IGF2R	JAK2	JUN	JUNB	JUND
D	KIT	KITLG	KRAS	MCL1	MDM2	MEN1	MET	MGMT	MLH1	MOS	MYB	MYC
E	MYCN	NF1	NF2	NFKB1	NFKBIA	NRAS	PIK3C2A	PIK3CA	PML	PRKCA	RAF1	RARA
F	RASSF1	RB1	REL	RET	ROS1	RUNX1	RUNX3	S100A4	SERPINB5	SH3PXD2A	SMAD4	SRC
G	STAT3	STK11	TGFB1	TNF	TP53	TP73	TSC1	VHL	WT1	WWOX	XRCC1	ZHX2
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	SBH1219746	ENST00000512211.6	APC	ENSG00000134982	APC, WNT signaling pathway regulator Source HGNC Symbol Acc HGNC 583
A04	SBH1219763	ENST00000452508.6	ATM	ENSG00000149311	ATM serine/threonine kinase Source HGNC Symbol Acc HGNC 795
A05	SBH1219783	ENST00000391871.4	BAX	ENSG00000087088	BCL2 associated X, apoptosis regulator Source HGNC Symbol Acc HGNC 959
A06	SBH1219786	ENST00000398117.1	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
A07	SBH0216029	ENST00000450273.1	BCL2L1	ENSG00000171552	BCL2 like 1 Source HGNC Symbol Acc HGNC 992
A08	SBH0542033	ENST00000305877.12	BCR	ENSG00000186716	BCR, RhoGEF and GTPase activating protein Source HGNC Symbol Acc HGNC 1014
A09	SBH1219814	ENST00000357654.8	BRCA1	ENSG00000012048	BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100
A10	SBH1219815	ENST00000380152.7	BRCA2	ENSG00000139618	BRCA2, DNA repair associated Source HGNC Symbol Acc HGNC 1101
A11	SBH0075404	ENST00000358485.8	CASP8	ENSG00000064012	caspase 8 Source HGNC Symbol Acc HGNC 1509
A12	SBH0434090	ENST00000227507.2	CCND1	ENSG00000110092	cyclin D1 Source HGNC Symbol Acc HGNC 1582
B01	SBH1219869	ENST00000261769.10	CDH1	ENSG00000039068	cadherin 1 Source HGNC Symbol Acc HGNC 1748
B02	SBH1219873	ENST00000547281.5	CDK4	ENSG00000135446	cyclin dependent kinase 4 Source HGNC Symbol Acc HGNC 1773
B03	SBH0608500	ENST00000244741.9	CDKN1A	ENSG00000124762	cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784
B04	SBH0349548	ENST00000304494.9	CDKN2A	ENSG00000147889	cyclin dependent kinase inhibitor 2A Source HGNC Symbol Acc HGNC 1787
B05	SBH1219880	ENST00000276925.7	CDKN2B	ENSG00000147883	cyclin dependent kinase inhibitor 2B Source HGNC Symbol Acc HGNC 1788
B06	SBH1219881	ENST00000458126.6	CDKN3	ENSG00000100526	cyclin dependent kinase inhibitor 3 Source HGNC Symbol Acc HGNC 1791
B07	SBH0588482	ENST00000396183.7	CTNNB1	ENSG00000168036	catenin beta 1 Source HGNC Symbol Acc HGNC 2514
B08	SBH1219965	ENST00000343380.6	E2F1	ENSG00000101412	E2F transcription factor 1 Source HGNC Symbol Acc HGNC 3113
B09	SBH0321686	ENST00000265171.9	EGF	ENSG00000138798	epidermal growth factor Source HGNC Symbol Acc HGNC 3229
B10	SBH1219973	ENST00000376983.8	ELK1	ENSG00000126767	ELK1, ETS transcription factor Source HGNC Symbol Acc HGNC 3321
B11	SBH0056013	ENST00000269571.9	ERBB2	ENSG00000141736	erb-b2 receptor tyrosine kinase 2 Source HGNC Symbol Acc HGNC 3430
B12	SBH0125383	ENST00000206249.7	ESR1	ENSG00000091831	estrogen receptor 1 Source HGNC Symbol Acc HGNC 3467
C01	SBH0541614	ENST00000526145.6	ETS1	ENSG00000134954	ETS proto-oncogene 1, transcription factor Source HGNC Symbol Acc HGNC 3488
C02	SBH0626536	ENST00000492590.6	FHIT	ENSG00000189283	fragile histidine triad Source HGNC Symbol Acc HGNC 3701
C03	SBH1220004	ENST00000554617.1	FOS	ENSG00000170345	Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796
C04	SBH0331553	ENST00000371116.3	FOXD3	ENSG00000187140	forkhead box D3 Source HGNC Symbol Acc HGNC 3804
C05	SBH1220058	ENST00000457544.7	HGF	ENSG00000019991	hepatocyte growth factor Source HGNC Symbol Acc HGNC 4893
C06	SBH0170404	ENST00000571875.2	HIC1	ENSG00000177374	HIC ZBTB transcriptional repressor 1 Source HGNC Symbol Acc HGNC 4909
C07	SBH0257285	ENST00000493230.5	HRAS	ENSG00000174775	HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173
C08	SBH0270094	ENST00000647592.1	IGF2R	ENSG00000197081	insulin like growth factor 2 receptor Source HGNC Symbol Acc HGNC 5467
C09	SBH0334185	ENST00000381652.3	JAK2	ENSG00000096968	Janus kinase 2 Source HGNC Symbol Acc HGNC 6192
C10	SBH0613340	ENST00000371222.3	JUN	ENSG00000177606	Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204
		ENST00000302		ENSG00000	JunB proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220143	754.6	JUNB	171223	Acc HGNC 6205
C12	SBH0615164	ENST00000600 972.1	JUND	ENSG00000 130522	JunD proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6206
D01	SBH0452028	ENST00000288 135.5	KIT	ENSG00000 157404	KIT proto-oncogene receptor tyrosine kinase Source HGNC Symbol Acc HGNC 6342
D02	SBH0076738	ENST00000644 744.1	KITLG	ENSG00000 049130	KIT ligand Source HGNC Symbol Acc HGNC 6343
D03	SBH0300474	ENST00000556 131.1	KRAS	ENSG00000 133703	KRAS proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 6407
D04	SBH1220199	ENST00000620 947.4	MCL1	ENSG00000 143384	MCL1, BCL2 family apoptosis regulator Source HGNC Symbol Acc HGNC 6943
D05	SBH1220207	ENST00000523 991.5	MDM2	ENSG00000 135679	MDM2 proto-oncogene Source HGNC Symbol Acc HGNC 6973
D06	SBH0088177	ENST00000377 313.5	MEN1	ENSG00000 133895	menin 1 Source HGNC Symbol Acc HGNC 7010
D07	SBH1220210	ENST00000318 493.11	MET	ENSG00000 105976	MET proto-oncogene, receptor tyrosine kinase Source HGNC Symbol Acc HGNC 7029
D08	SBH0587302	ENST00000306 010.8	MGMT	ENSG00000 170430	O-6-methylguanine-DNA methyltransferase Source HGNC Symbol Acc HGNC 7059
D09	SBH0236577	ENST00000231 790.6	MLH1	ENSG00000 076242	mutL homolog 1 Source HGNC Symbol Acc HGNC 7127
D10	SBH0504342	ENST00000311 923.1	MOS	ENSG00000 172680	MOS proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 7199
D11	SBH0113462	ENST00000316 528.12	MYB	ENSG00000 118513	MYB proto-oncogene, transcription factor Source HGNC Symbol Acc HGNC 7545
D12	SBH0426145	ENST00000524 013.1	MYC	ENSG00000 136997	MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553
E01	SBH0020367	ENST00000281 043.4	MYCN	ENSG00000 134323	MYCN proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7559
E02	SBH0472829	ENST00000358 273.8	NF1	ENSG00000 196712	neurofibromin 1 Source HGNC Symbol Acc HGNC 7765
E03	SBH0223108	ENST00000361 452.8	NF2	ENSG00000 186575	neurofibromin 2 Source HGNC Symbol Acc HGNC 7773
E04	SBH1220264	ENST00000651 197.1	NFKB1	ENSG00000 109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E05	SBH0552847	ENST00000216 797.9	NFKBIA	ENSG00000 100906	NFKB inhibitor alpha Source HGNC Symbol Acc HGNC 7797
E06	SBH0148098	ENST00000369 535.5	NRAS	ENSG00000 213281	NRAS proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 7989
E07	SBH0304342	ENST00000531 428.1	PIK3C2A	ENSG00000 011405	phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 alpha Source HGNC Symbol Acc HGNC 8971
E08	SBH0121428	ENST00000462 255.1	PIK3CA	ENSG00000 121879	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source HGNC Symbol Acc HGNC 8975
E09	SBH0001765	ENST00000268 058.7	PML	ENSG00000 140464	promyelocytic leukemia Source HGNC Symbol Acc HGNC 9113
E10	SBH0105563	ENST00000578 063.5	PRKCA	ENSG00000 154229	protein kinase C alpha Source HGNC Symbol Acc HGNC 9393
E11	SBH0573752	ENST00000416 093.1	RAF1	ENSG00000 132155	Raf-1 proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 9829
E12	SBH0530002	ENST00000425 707.7	RARA	ENSG00000 131759	retinoic acid receptor alpha Source HGNC Symbol Acc HGNC 9864
F01	SBH0462049	ENST00000359 365.8	RASSF1	ENSG00000 068028	Ras association domain family member 1 Source HGNC Symbol Acc HGNC 9882
F02	SBH0093533	ENST00000267 163.5	RB1	ENSG00000 139687	RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884
F03	SBH1220362	ENST00000394 479.3	REL	ENSG00000 162924	REL proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9954
F04	SBH0218532	ENST00000340 058.5	RET	ENSG00000 165731	ret proto-oncogene Source HGNC Symbol Acc HGNC 9967
F05	SBH0173207	ENST00000368 507.7	ROS1	ENSG00000 047936	ROS proto-oncogene 1, receptor tyrosine kinase Source HGNC Symbol Acc HGNC 10261
F06	SBH0384721	ENST00000437 180.5	RUNX1	ENSG00000 159216	runt related transcription factor 1 Source HGNC Symbol Acc HGNC 10471
F07	SBH0602622	ENST00000496 967.1	RUNX3	ENSG00000 020633	runt related transcription factor 3 Source HGNC Symbol Acc HGNC 10473
F08	SBH0029173	ENST00000368 715.5	S100A4	ENSG00000 196154	S100 calcium binding protein A4 Source HGNC Symbol Acc HGNC 10494
F09	SBH0335826	ENST00000424 602.1	SERPINB5	ENSG00000 206075	serpin family B member 5 Source HGNC Symbol Acc HGNC 8949
F10	SBH0179564	ENST00000315 994.6	SH3PXD2A	ENSG00000 107957	SH3 and PX domains 2A Source HGNC Symbol Acc HGNC 23664

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH1220406	ENST00000588745.5	SMAD4	ENSG00000141646	SMAD family member 4 Source HGNC Symbol Acc HGNC 6770
F12	SBH0514958	ENST00000489153.1	SRC	ENSG00000197122	SRC proto-oncogene, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 11283
G01	SBH0341614	ENST00000404395.3	STAT3	ENSG00000168610	signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364
G02	SBH0428349	ENST00000589152.5	STK11	ENSG00000118046	serine/threonine kinase 11 Source HGNC Symbol Acc HGNC 11389
G03	SBH1220443	ENST00000598758.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G04	SBH1220471	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G05	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G06	SBH1220488	ENST00000346387.8	TP73	ENSG00000078900	tumor protein p73 Source HGNC Symbol Acc HGNC 12003
G07	SBH0061747	ENST00000647506.1	TSC1	ENSG00000165699	TSC complex subunit 1 Source HGNC Symbol Acc HGNC 12362
G08	SBH0274412	ENST00000345392.2	VHL	ENSG00000134086	von Hippel-Lindau tumor suppressor Source HGNC Symbol Acc HGNC 12687
G09	SBH0326930	ENST00000650861.1	WT1	ENSG00000184937	Wilms tumor 1 Source HGNC Symbol Acc HGNC 12796
G10	SBH0380916	ENST00000355860.7	WWOX	ENSG00000186153	WW domain containing oxidoreductase Source HGNC Symbol Acc HGNC 12799
G11	SBH1220540	ENST00000598165.5	XRCC1	ENSG00000073050	X-ray repair cross complementing 1 Source HGNC Symbol Acc HGNC 12828
G12	SBH0012414	ENST00000314393.6	ZHX2	ENSG00000178764	zinc fingers and homeoboxes 2 Source HGNC Symbol Acc HGNC 18513
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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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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