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

Human Tumor Metastasis

Cat. no. 249950 SBHS-028ZA

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** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	APC	BRMS1	CCL7	CD44	CD82	CDH1	CDH11	CDH6	CDKN2A	CHD4	COL4A2	CST7
B	CTBP1	CTNNA1	CTSK	CTSL	CXCL12	CXCR2	CXCR4	DENR	EPHB2	ETV4	EWSR1	FAT1
C	FGFR4	FLT4	FN1	FXYD5	GNRH1	HGF	HPSE	HRAS	HTATIP2	IGF1	IL18	IL1B
D	ITGA7	ITGB3	KISS1	KISS1R	KRAS		MDM2	MET	METAP2	MGAT5	MMP10	MMP11
E	MMP13	MMP2	MMP3	MMP7	MMP9	MTA1	MTSS1	MYC	MYCL	NF2	NME1	NME4
F	NR4A3	PLAUR	PNN	PTEN	RB1	RORB	RPSA	SERPINE1	SET	SMAD2	SMAD4	SRC
G	SSTR2	SYK	TCF20	TGFB1	TIMP2	TIMP3	TIMP4	TNFSF10	TP53	TRPM1	TSHR	VEGFA
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	SBH1219746	ENST00000512211.6	APC	ENSG00000134982	APC, WNT signaling pathway regulator Source HGNC Symbol Acc HGNC 583
A02	SBH0357920	ENST00000425825.6	BRMS1	ENSG00000174744	BRMS1, transcriptional repressor and anoikis regulator Source HGNC Symbol Acc HGNC 17262
A03	SBH0098305	ENST00000378569.2	CCL7	ENSG00000108688	C-C motif chemokine ligand 7 Source HGNC Symbol Acc HGNC 10634
A04	SBH0074994	ENST00000428726.7	CD44	ENSG00000026508	CD44 molecule (Indian blood group) Source HGNC Symbol Acc HGNC 1681
A05	SBH0235247	ENST00000227155.9	CD82	ENSG00000085117	CD82 molecule Source HGNC Symbol Acc HGNC 6210
A06	SBH1219869	ENST00000261769.10	CDH1	ENSG00000039068	cadherin 1 Source HGNC Symbol Acc HGNC 1748
A07	SBH0285104	ENST00000564317.5	CDH11	ENSG00000140937	cadherin 11 Source HGNC Symbol Acc HGNC 1750
A08	SBH0158262	ENST00000514738.5	CDH6	ENSG00000113361	cadherin 6 Source HGNC Symbol Acc HGNC 1765
A09	SBH0349548	ENST00000304494.9	CDKN2A	ENSG00000147889	cyclin dependent kinase inhibitor 2A Source HGNC Symbol Acc HGNC 1787
A10	SBH0546437	ENST00000545942.6	CHD4	ENSG00000111642	chromodomain helicase DNA binding protein 4 Source HGNC Symbol Acc HGNC 1919
A11	SBH0171200	ENST00000360467.6	COL4A2	ENSG00000134871	collagen type IV alpha 2 chain Source HGNC Symbol Acc HGNC 2203
A12	SBH0103293	ENST00000480798.2	CST7	ENSG00000077984	cystatin F Source HGNC Symbol Acc HGNC 2479
B01	SBH0133926	ENST00000290921.10	CTBP1	ENSG00000159692	C-terminal binding protein 1 Source HGNC Symbol Acc HGNC 2494
B02	SBH1219918	ENST00000521640.5	CTNNA1	ENSG00000044115	catenin alpha 1 Source HGNC Symbol Acc HGNC 2509
B03	SBH0609743	ENST00000443913.1	CTSK	ENSG00000143387	cathepsin K Source HGNC Symbol Acc HGNC 2536
B04	SBH0633657	ENST00000340342.10	CTSL	ENSG00000135047	cathepsin L Source HGNC Symbol Acc HGNC 2537
B05	SBH0010818	ENST00000374429.6	CXCL12	ENSG00000107562	C-X-C motif chemokine ligand 12 Source HGNC Symbol Acc HGNC 10672
B06	SBH1219933	ENST00000318507.7	CXCR2	ENSG00000180871	C-X-C motif chemokine receptor 2 Source HGNC Symbol Acc HGNC 6027
B07	SBH0591410	ENST00000241393.3	CXCR4	ENSG00000121966	C-X-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 2561
B08	SBH0562139	ENST00000455982.2	DENR	ENSG00000139726	density regulated re-initiation and release factor Source HGNC Symbol Acc HGNC 2769
B09	SBH0232284	ENST00000490436.1	EPHB2	ENSG00000133216	EPH receptor B2 Source HGNC Symbol Acc HGNC 3393
B10	SBH0475675	ENST00000393664.6	ETV4	ENSG00000175832	ETS variant 4 Source HGNC Symbol Acc HGNC 3493
B11	SBH0260136	ENST00000436425.5	EWSR1	ENSG00000182944	EWS RNA binding protein 1 Source HGNC Symbol Acc HGNC 3508
B12	SBH0376860	ENST00000507105.1	FAT1	ENSG00000083857	FAT atypical cadherin 1 Source HGNC Symbol Acc HGNC 3595
C01	SBH0523576	ENST00000509511.5	FGFR4	ENSG00000160867	fibroblast growth factor receptor 4 Source HGNC Symbol Acc HGNC 3691
C02	SBH0243959	ENST00000512795.1	FLT4	ENSG00000037280	fms related tyrosine kinase 4 Source HGNC Symbol Acc HGNC 3767
C03	SBH1220003	ENST00000354785.9	FN1	ENSG00000115414	fibronectin 1 Source HGNC Symbol Acc HGNC 3778
C04	SBH0638753	ENST00000392218.6	FXYD5	ENSG00000089327	FXYD domain containing ion transport regulator 5 Source HGNC Symbol Acc HGNC 4029
C05	SBH0570805	ENST00000421054.7	GNRH1	ENSG00000147437	gonadotropin releasing hormone 1 Source HGNC Symbol Acc HGNC 4419
C06	SBH1220058	ENST00000457544.7	HGF	ENSG00000019991	hepatocyte growth factor Source HGNC Symbol Acc HGNC 4893
C07	SBH1220068	ENST00000513463.1	HPSE	ENSG00000173083	heparanase Source HGNC Symbol Acc HGNC 5164
C08	SBH0257285	ENST00000493230.5	HRAS	ENSG00000174775	HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173
C09	SBH0388626	ENST00000451739.6	HTATIP2	ENSG00000109854	HIV-1 Tat interactive protein 2 Source HGNC Symbol Acc HGNC 16637
C10	SBH1220091	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
		ENST00000524		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220103	595.5	IL18	150782	interleukin 18 Source HGNC Symbol Acc HGNC 5986
C12	SBH0079231	ENST00000263 341.6	IL1B	ENSG00000 125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
D01	SBH0439269	ENST00000257 879.10	ITGA7	ENSG00000 135424	integrin subunit alpha 7 Source HGNC Symbol Acc HGNC 6143
D02	SBH1220137	ENST00000559 488.5	ITGB3	ENSG00000 259207	integrin subunit beta 3 Source HGNC Symbol Acc HGNC 6156
D03	SBH0466682	ENST00000367 194.5	KISS1	ENSG00000 170498	KiSS-1 metastasis suppressor Source HGNC Symbol Acc HGNC 6341
D04	SBH0308028	ENST00000592 648.1	KISS1R	ENSG00000 116014	KISS1 receptor Source HGNC Symbol Acc HGNC 4510
D05	SBH0300474	ENST00000556 131.1	KRAS	ENSG00000 133703	KRAS proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 6407
D06	SBH0369285	ENST00000264 036.6		ENSG00000 076706	melanoma cell adhesion molecule Source NCBI gene Acc 4162
D07	SBH1220207	ENST00000523 991.5	MDM2	ENSG00000 135679	MDM2 proto-oncogene Source HGNC Symbol Acc HGNC 6973
D08	SBH1220210	ENST00000318 493.11	MET	ENSG00000 105976	MET proto-oncogene, receptor tyrosine kinase Source HGNC Symbol Acc HGNC 7029
D09	SBH0029471	ENST00000553 151.5	METAP2	ENSG00000 111142	methionyl aminopeptidase 2 Source HGNC Symbol Acc HGNC 16672
D10	SBH0419990	ENST00000281 923.4	MGAT5	ENSG00000 152127	alpha-1,6-mannosylglycoprotein 6-beta-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 7049
D11	SBH1220216	ENST00000279 441.9	MMP10	ENSG00000 166670	matrix metallopeptidase 10 Source HGNC Symbol Acc HGNC 7156
D12	SBH1220217	ENST00000215 743.8	MMP11	ENSG00000 099953	matrix metallopeptidase 11 Source HGNC Symbol Acc HGNC 7157
E01	SBH1220218	ENST00000615 555.4	MMP13	ENSG00000 137745	matrix metallopeptidase 13 Source HGNC Symbol Acc HGNC 7159
E02	SBH1220222	ENST00000570 308.5	MMP2	ENSG00000 087245	matrix metallopeptidase 2 Source HGNC Symbol Acc HGNC 7166
E03	SBH1220223	ENST00000299 855.10	MMP3	ENSG00000 149968	matrix metallopeptidase 3 Source HGNC Symbol Acc HGNC 7173
E04	SBH1220224	ENST00000260 227.5	MMP7	ENSG00000 137673	matrix metallopeptidase 7 Source HGNC Symbol Acc HGNC 7174
E05	SBH0471278	ENST00000372 330.3	MMP9	ENSG00000 100985	matrix metallopeptidase 9 Source HGNC Symbol Acc HGNC 7176
E06	SBH0256481	ENST00000435 036.6	MTA1	ENSG00000 182979	metastasis associated 1 Source HGNC Symbol Acc HGNC 7410
E07	SBH0360749	ENST00000522 118.1	MTSS1	ENSG00000 170873	MTSS1, I-BAR domain containing Source HGNC Symbol Acc HGNC 20443
E08	SBH0426145	ENST00000524 013.1	MYC	ENSG00000 136997	MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553
E09	SBH0094042	ENST00000450 953.3	MYCL	ENSG00000 116990	MYCL proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7555
E10	SBH0223108	ENST00000361 452.8	NF2	ENSG00000 186575	neurofibromin 2 Source HGNC Symbol Acc HGNC 7773
E11	SBH0310094	ENST00000512 768.1	NME1	ENSG00000 239672	NME/NM23 nucleoside diphosphate kinase 1 Source HGNC Symbol Acc HGNC 7849
E12	SBH0232559	ENST00000397 722.5	NME4	ENSG00000 103202	NME/NM23 nucleoside diphosphate kinase 4 Source HGNC Symbol Acc HGNC 7852
F01	SBH0467547	ENST00000395 097.7	NR4A3	ENSG00000 119508	nuclear receptor subfamily 4 group A member 3 Source HGNC Symbol Acc HGNC 7982
F02	SBH0270684	ENST00000593 939.5	PLAUR	ENSG00000 011422	plasminogen activator, urokinase receptor Source HGNC Symbol Acc HGNC 9053
F03	SBH0638466	ENST00000556 530.1	PNN	ENSG00000 100941	pinin, desmosome associated protein Source HGNC Symbol Acc HGNC 9162
F04	SBH1225378	ENST00000371 953.8	PTEN	ENSG00000 171862	phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588
F05	SBH0093533	ENST00000267 163.5	RB1	ENSG00000 139687	RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884
F06	SBH0272011	ENST00000376 896.8	RORB	ENSG00000 198963	RAR related orphan receptor B Source HGNC Symbol Acc HGNC 10259
F07	SBH0045753	ENST00000487 876.1	RPSA	ENSG00000 168028	ribosomal protein SA Source HGNC Symbol Acc HGNC 6502
F08	SBH1220389	ENST00000223 095.4	SERPINE1	ENSG00000 106366	serpin family E member 1 Source HGNC Symbol Acc HGNC 8583
F09	SBH0393000	ENST00000409 104.7	SET	ENSG00000 119335	SET nuclear proto-oncogene Source HGNC Symbol Acc HGNC 10760
F10	SBH1220405	ENST00000262 160.11	SMAD2	ENSG00000 175387	SMAD family member 2 Source HGNC Symbol Acc HGNC 6768

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	SBH0022636	ENST00000579323.5	SSTR2	ENSG00000180616	somatostatin receptor 2 Source HGNC Symbol Acc HGNC 11331
G02	SBH0411535	ENST00000375746.1	SYK	ENSG00000165025	spleen associated tyrosine kinase Source HGNC Symbol Acc HGNC 11491
G03	SBH0632276	ENST00000404876.1	TCF20	ENSG00000100207	transcription factor 20 Source HGNC Symbol Acc HGNC 11631
G04	SBH1220443	ENST00000598758.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G05	SBH0450624	ENST00000262768.11	TIMP2	ENSG00000035862	TIMP metallopeptidase inhibitor 2 Source HGNC Symbol Acc HGNC 11821
G06	SBH1220455	ENST00000266085.6	TIMP3	ENSG00000100234	TIMP metallopeptidase inhibitor 3 Source HGNC Symbol Acc HGNC 11822
G07	SBH1220456	ENST00000287814.5	TIMP4	ENSG00000157150	TIMP metallopeptidase inhibitor 4 Source HGNC Symbol Acc HGNC 11823
G08	SBH1220477	ENST00000241261.7	TNFSF10	ENSG00000121858	TNF superfamily member 10 Source HGNC Symbol Acc HGNC 11925
G09	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G10	SBH0156290	ENST00000558070.1	TRPM1	ENSG00000134160	transient receptor potential cation channel subfamily M member 1 Source HGNC Symbol Acc HGNC 7146
G11	SBH0106957	ENST00000541158.6	TSHR	ENSG00000165409	thyroid stimulating hormone receptor Source HGNC Symbol Acc HGNC 12373
G12	SBH0420322	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
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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