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

Human MAP Kinase Signaling Pathway

Cat. no. 249950 SBHS-061ZR

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	ARAF	ATF2	BRAF	CCNA1	CCNA2	CCNB1	CCNB2	CCND1	CCND2	CCND3	CCNE1	CDC42
B	CDK2	CDK4	CDK6	CDKN1A	CDKN1B	CDKN1C	CDKN2A	CDKN2B	CDKN2C	CDKN2D	CHUK	COL1A1
C	CREB1	CREBBP	DLK1	E2F1	EGFR	EGR1	ELK1	ETS1	ETS2	FOS	GRB2	HRAS
D	HSPA5	HSPB1	JUN	KRAS	KSR1	LAMTOR3	MAP2K1	MAP2K2	MAP2K3	MAP2K4	MAP2K5	MAP2K6
E	MAP2K7	MAP3K1	MAP3K2	MAP3K3	MAP3K4	MAP4K1	MAPK1	MAPK10	MAPK11	MAPK12	MAPK13	MAPK14
F	MAPK3	MAPK6	MAPK7	MAPK8	MAPK8IP2	MAPK9	MAPKAPK2	MAPKAPK3	MAX	MEF2C	MKNK1	MOS
G	MST1	MYC	NFATC4	NRAS	PAK1	PRDX6	RAC1	RAF1	RB1	SFN	SMAD4	TP53
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	SBH0270663	ENST00000489496.1	ARAF	ENSG00000078061	A-Raf proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 646
A02	SBH1219753	ENST00000409833.5	ATF2	ENSG00000115966	activating transcription factor 2 Source HGNC Symbol Acc HGNC 784
A03	SBH1219813	ENST00000288602.11	BRAF	ENSG00000157764	B-Raf proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 1097
A04	SBH0219497	ENST00000440264.5	CCNA1	ENSG00000133101	cyclin A1 Source HGNC Symbol Acc HGNC 1577
A05	SBH0652713	ENST00000274026.10	CCNA2	ENSG00000145386	cyclin A2 Source HGNC Symbol Acc HGNC 1578
A06	SBH1219842	ENST00000256442.10	CCNB1	ENSG00000134057	cyclin B1 Source HGNC Symbol Acc HGNC 1579
A07	SBH1219843	ENST00000621385.1	CCNB2	ENSG00000157456	cyclin B2 Source HGNC Symbol Acc HGNC 1580
A08	SBH0434090	ENST00000227507.2	CCND1	ENSG00000110092	cyclin D1 Source HGNC Symbol Acc HGNC 1582
A09	SBH1219845	ENST00000261254.8	CCND2	ENSG00000118971	cyclin D2 Source HGNC Symbol Acc HGNC 1583
A10	SBH0542733	ENST00000372991.8	CCND3	ENSG00000112576	cyclin D3 Source HGNC Symbol Acc HGNC 1585
A11	SBH1219846	ENST00000262643.8	CCNE1	ENSG00000105173	cyclin E1 Source HGNC Symbol Acc HGNC 1589
A12	SBH0651826	ENST00000651171.1	CDC42	ENSG00000070831	cell division cycle 42 Source HGNC Symbol Acc HGNC 1736
B01	SBH1219872	ENST00000553376.5	CDK2	ENSG00000123374	cyclin dependent kinase 2 Source HGNC Symbol Acc HGNC 1771
B02	SBH1219873	ENST00000547281.5	CDK4	ENSG00000135446	cyclin dependent kinase 4 Source HGNC Symbol Acc HGNC 1773
B03	SBH1219876	ENST00000424848.2	CDK6	ENSG00000105810	cyclin dependent kinase 6 Source HGNC Symbol Acc HGNC 1777
B04	SBH0608500	ENST00000244741.9	CDKN1A	ENSG00000124762	cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784
B05	SBH1219879	ENST00000442489.1	CDKN1B	ENSG00000111276	cyclin dependent kinase inhibitor 1B Source HGNC Symbol Acc HGNC 1785
B06	SBH0517353	ENST00000440480.7	CDKN1C	ENSG00000129757	cyclin dependent kinase inhibitor 1C Source HGNC Symbol Acc HGNC 1786
B07	SBH0349548	ENST00000304494.9	CDKN2A	ENSG00000147889	cyclin dependent kinase inhibitor 2A Source HGNC Symbol Acc HGNC 1787
B08	SBH1219880	ENST00000276925.7	CDKN2B	ENSG00000147883	cyclin dependent kinase inhibitor 2B Source HGNC Symbol Acc HGNC 1788
B09	SBH0381070	ENST00000371761.4	CDKN2C	ENSG00000123080	cyclin dependent kinase inhibitor 2C Source HGNC Symbol Acc HGNC 1789
B10	SBH0283440	ENST00000393599.2	CDKN2D	ENSG00000129355	cyclin dependent kinase inhibitor 2D Source HGNC Symbol Acc HGNC 1790
B11	SBH1219887	ENST00000370397.8	CHUK	ENSG00000213341	conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974
B12	SBH0268763	ENST00000225964.9	COL1A1	ENSG00000108821	collagen type I alpha 1 chain Source HGNC Symbol Acc HGNC 2197
C01	SBH0077258	ENST00000353267.8	CREB1	ENSG00000118260	cAMP responsive element binding protein 1 Source HGNC Symbol Acc HGNC 2345
C02	SBH0411189	ENST00000571826.5	CREBBP	ENSG00000005339	CREB binding protein Source HGNC Symbol Acc HGNC 2348
C03	SBH0520266	ENST00000650464.1	DLK1	ENSG00000185559	delta like non-canonical Notch ligand 1 Source HGNC Symbol Acc HGNC 2907
C04	SBH1219965	ENST00000343380.6	E2F1	ENSG00000101412	E2F transcription factor 1 Source HGNC Symbol Acc HGNC 3113
C05	SBH1219970	ENST00000454757.6	EGFR	ENSG00000146648	epidermal growth factor receptor Source HGNC Symbol Acc HGNC 3236
C06	SBH0290504	ENST00000239938.5	EGR1	ENSG00000120738	early growth response 1 Source HGNC Symbol Acc HGNC 3238
C07	SBH1219973	ENST00000376983.8	ELK1	ENSG00000126767	ELK1, ETS transcription factor Source HGNC Symbol Acc HGNC 3321
C08	SBH0541614	ENST00000526145.6	ETS1	ENSG00000134954	ETS proto-oncogene 1, transcription factor Source HGNC Symbol Acc HGNC 3488
C09	SBH1219986	ENST00000432278.5	ETS2	ENSG00000157557	ETS proto-oncogene 2, transcription factor Source HGNC Symbol Acc HGNC 3489
C10	SBH1220004	ENST00000554617.1	FOS	ENSG00000170345	Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796
		ENST00000392		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220038	563.5	GRB2	177885	growth factor receptor bound protein 2 Source HGNC Symbol Acc HGNC 4566
C12	SBH0257285	ENST00000493230.5	HRAS	ENSG00000174775	HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173
D01	SBH1220072	ENST00000324460.7	HSPA5	ENSG00000044574	heat shock protein family A (Hsp70) member 5 Source HGNC Symbol Acc HGNC 5238
D02	SBH0474094	ENST00000429938.1	HSPB1	ENSG00000106211	heat shock protein family B (small) member 1 Source HGNC Symbol Acc HGNC 5246
D03	SBH0613340	ENST00000371222.3	JUN	ENSG00000177606	Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204
D04	SBH0300474	ENST00000556131.1	KRAS	ENSG00000133703	KRAS proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 6407
D05	SBH0460933	ENST00000580430.1	KSR1	ENSG00000141068	kinase suppressor of ras 1 Source HGNC Symbol Acc HGNC 6465
D06	SBH0551159	ENST00000226522.8	LAMTOR3	ENSG00000109270	late endosomal/lysosomal adaptor, MAPK and MTOR activator 3 Source HGNC Symbol Acc HGNC 15606
D07	SBH0671782	ENST00000307102.9	MAP2K1	ENSG00000169032	mitogen-activated protein kinase kinase 1 Source HGNC Symbol Acc HGNC 6840
D08	SBH0516649	ENST00000394867.8	MAP2K2	ENSG00000126934	mitogen-activated protein kinase kinase 2 Source HGNC Symbol Acc HGNC 6842
D09	SBH1220188	ENST00000613338.4	MAP2K3	ENSG00000034152	mitogen-activated protein kinase kinase 3 Source HGNC Symbol Acc HGNC 6843
D10	SBH1220189	ENST00000353533.10	MAP2K4	ENSG00000065559	mitogen-activated protein kinase kinase 4 Source HGNC Symbol Acc HGNC 6844
D11	SBH0596855	ENST00000558392.5	MAP2K5	ENSG00000137764	mitogen-activated protein kinase kinase 5 Source HGNC Symbol Acc HGNC 6845
D12	SBH1218288	ENST00000588110.5	MAP2K6	ENSG00000108984	mitogen-activated protein kinase kinase 6 Source HGNC Symbol Acc HGNC 6846
E01	SBH0339605	ENST00000397981.7	MAP2K7	ENSG00000076984	mitogen-activated protein kinase kinase 7 Source HGNC Symbol Acc HGNC 6847
E02	SBH1220190	ENST00000399503.4	MAP3K1	ENSG00000095015	mitogen-activated protein kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6848
E03	SBH0246906	ENST00000409179.2	MAP3K2	ENSG00000169967	mitogen-activated protein kinase kinase kinase 2 Source HGNC Symbol Acc HGNC 6854
E04	SBH0665887	ENST00000577597.5	MAP3K3	ENSG00000198909	mitogen-activated protein kinase kinase kinase 3 Source HGNC Symbol Acc HGNC 6855
E05	SBH0110415	ENST00000366919.6	MAP3K4	ENSG00000085511	mitogen-activated protein kinase kinase kinase 4 Source HGNC Symbol Acc HGNC 6856
E06	SBH0012271	ENST00000396857.7	MAP4K1	ENSG00000104814	mitogen-activated protein kinase kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6863
E07	SBH1220192	ENST00000544786.1	MAPK1	ENSG00000100030	mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6871
E08	SBH0213234	ENST00000641208.1	MAPK10	ENSG00000109339	mitogen-activated protein kinase 10 Source HGNC Symbol Acc HGNC 6872
E09	SBH0344387	ENST00000330651.11	MAPK11	ENSG00000185386	mitogen-activated protein kinase 11 Source HGNC Symbol Acc HGNC 6873
E10	SBH1220193	ENST00000395780.5	MAPK12	ENSG00000188130	mitogen-activated protein kinase 12 Source HGNC Symbol Acc HGNC 6874
E11	SBH0068887	ENST00000211287.9	MAPK13	ENSG00000156711	mitogen-activated protein kinase 13 Source HGNC Symbol Acc HGNC 6875
E12	SBH0102441	ENST00000229795.7	MAPK14	ENSG00000112062	mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876
F01	SBH1220194	ENST00000478356.5	MAPK3	ENSG00000102882	mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877
F02	SBH0016223	ENST00000558841.1	MAPK6	ENSG00000069956	mitogen-activated protein kinase 6 Source HGNC Symbol Acc HGNC 6879
F03	SBH0359593	ENST00000395604.8	MAPK7	ENSG00000166484	mitogen-activated protein kinase 7 Source HGNC Symbol Acc HGNC 6880
F04	SBH0294318	ENST00000395611.7	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
F05	SBH0637761	ENST00000329492.6	MAPK8IP2	ENSG00000008735	mitogen-activated protein kinase 8 interacting protein 2 Source HGNC Symbol Acc HGNC 6883
F06	SBH0380071	ENST00000343111.10	MAPK9	ENSG00000050748	mitogen-activated protein kinase 9 Source HGNC Symbol Acc HGNC 6886
F07	SBH0433514	ENST00000367103.3	MAPKAPK2	ENSG00000162889	mitogen-activated protein kinase-activated protein kinase 2 Source HGNC Symbol Acc HGNC 6887
F08	SBH0551979	ENST00000621469.5	MAPKAPK3	ENSG00000114738	mitogen-activated protein kinase-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6888
F09	SBH0511192	ENST00000554709.1	MAX	ENSG00000125952	MYC associated factor X Source HGNC Symbol Acc HGNC 6913
F10	SBH0475014	ENST00000625585.2	MEF2C	ENSG00000081189	myocyte enhancer factor 2C Source HGNC Symbol Acc HGNC 6996

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0525606	ENST00000650508.1	MKNK1	ENSG00000079277	MAP kinase interacting serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 7110
F12	SBH0504342	ENST00000311923.1	MOS	ENSG00000172680	MOS proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 7199
G01	SBH0527371	ENST00000484673.5	MST1	ENSG00000173531	macrophage stimulating 1 Source HGNC Symbol Acc HGNC 7380
G02	SBH0426145	ENST00000524013.1	MYC	ENSG00000136997	MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553
G03	SBH0453720	ENST00000557451.5	NFATC4	ENSG00000100968	nuclear factor of activated T cells 4 Source HGNC Symbol Acc HGNC 7778
G04	SBH0148098	ENST00000369535.5	NRAS	ENSG00000213281	NRAS proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 7989
G05	SBH0221748	ENST00000356341.7	PAK1	ENSG00000149269	p21 (RAC1) activated kinase 1 Source HGNC Symbol Acc HGNC 8590
G06	SBH1220330	ENST00000340385.6	PRDX6	ENSG00000117592	peroxiredoxin 6 Source HGNC Symbol Acc HGNC 16753
G07	SBH1220352	ENST00000356142.4	RAC1	ENSG00000136238	Rac family small GTPase 1 Source HGNC Symbol Acc HGNC 9801
G08	SBH0573752	ENST00000416093.1	RAF1	ENSG00000132155	Raf-1 proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 9829
G09	SBH0093533	ENST00000267163.5	RB1	ENSG00000139687	RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884
G10	SBH0603665	ENST00000339276.6	SFN	ENSG00000175793	stratifin Source HGNC Symbol Acc HGNC 10773
G11	SBH1220406	ENST00000588745.5	SMAD4	ENSG00000141646	SMAD family member 4 Source HGNC Symbol Acc HGNC 6770
G12	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
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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