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

Human T Cell Anergy & Immune Tolerance

Cat. no. 249950 SBHS-074ZR

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	BTLA	CBLB	CCL3L3	CCR4	CD27	CD28	CD40	CD40LG	CD70	CDK2	CDK4	CMA1
B	CSF1	CSF2	CTLA4	DGKA	DGKZ	EGR2	EGR3	EOMES	FAS	FASLG	FOS	FOXP1
C	FOXP2	FOXP3	GATA3	GZMB	HDAC9	ICAM1	ICOS	IFNG	IL10	IL10RA	IL13	IL15
D	IL17A	IL1A	IL2	IL2RA	IL2RB	IL31	IL4	IL5	IL6	IL7R	ING4	IRF4
E	ITCH	ITGA1	JAK1	JAK3	JUN	LAT	LEP	LGALS3	LTA	MEF2A	NFATC1	NFATC2
F	NFATC3	NFKB1	NHLH2	NOTCH1	PDCD1	PRF1	PRKCG	PTGER2	PTGS2	RNF128	SELL	STAT3
G	STAT6	TBX21	TGFB1	TNFRSF10A	TNFRSF14	TNFRSF18	TNFRSF4	TNFRSF8	TNFRSF9	TNFSF10	TNFSF14	TNFSF8
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	SBH0057478	ENST00000334529.10	BTLA	ENSG00000186265	B and T lymphocyte associated Source HGNC Symbol Acc HGNC 21087
A02	SBH0160365	ENST00000264122.8	CBLB	ENSG00000114423	Cbl proto-oncogene B Source HGNC Symbol Acc HGNC 1542
A03	SBH0063097	ENST00000619989.1	CCL3L3	ENSG00000276085	C-C motif chemokine ligand 3 like 1 Source HGNC Symbol Acc HGNC 10628
A04	SBH1219853	ENST00000330953.5	CCR4	ENSG00000183813	C-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 1605
A05	SBH1219859	ENST00000266557.3	CD27	ENSG00000139193	CD27 molecule Source HGNC Symbol Acc HGNC 11922
A06	SBH0430835	ENST00000458610.6	CD28	ENSG00000178562	CD28 molecule Source HGNC Symbol Acc HGNC 1653
A07	SBH1219861	ENST00000372285.7	CD40	ENSG00000101017	CD40 molecule Source HGNC Symbol Acc HGNC 11919
A08	SBH1219862	ENST00000370629.6	CD40LG	ENSG00000102245	CD40 ligand Source HGNC Symbol Acc HGNC 11935
A09	SBH1219863	ENST00000245903.4	CD70	ENSG00000125726	CD70 molecule Source NCBI gene Acc 970
A10	SBH1219872	ENST00000553376.5	CDK2	ENSG00000123374	cyclin dependent kinase 2 Source HGNC Symbol Acc HGNC 1771
A11	SBH1219873	ENST00000547281.5	CDK4	ENSG00000135446	cyclin dependent kinase 4 Source HGNC Symbol Acc HGNC 1773
A12	SBH0121524	ENST00000206446.4	CMA1	ENSG00000092009	chymase 1 Source HGNC Symbol Acc HGNC 2097
B01	SBH1219913	ENST00000420111.6	CSF1	ENSG00000184371	colony stimulating factor 1 Source HGNC Symbol Acc HGNC 2432
B02	SBH1219914	ENST00000296871.4	CSF2	ENSG00000164400	colony stimulating factor 2 Source HGNC Symbol Acc HGNC 2434
B03	SBH0671849	ENST00000472206.1	CTLA4	ENSG00000163599	cytotoxic T-lymphocyte associated protein 4 Source HGNC Symbol Acc HGNC 2505
B04	SBH0263463	ENST00000549097.5	DGKA	ENSG00000065357	diacylglycerol kinase alpha Source HGNC Symbol Acc HGNC 2849
B05	SBH0249380	ENST00000524448.1	DGKZ	ENSG00000149091	diacylglycerol kinase zeta Source HGNC Symbol Acc HGNC 2857
B06	SBH0476440	ENST00000242480.4	EGR2	ENSG00000122877	early growth response 2 Source HGNC Symbol Acc HGNC 3239
B07	SBH0457320	ENST00000518773.1	EGR3	ENSG00000179388	early growth response 3 Source HGNC Symbol Acc HGNC 3240
B08	SBH0403457	ENST00000449599.3	EOMES	ENSG00000163508	eomesodermin Source HGNC Symbol Acc HGNC 3372
B09	SBH1219994	ENST00000652046.1	FAS	ENSG00000026103	Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920
B10	SBH1219995	ENST00000367721.3	FASLG	ENSG00000117560	Fas ligand Source HGNC Symbol Acc HGNC 11936
B11	SBH1220004	ENST00000554617.1	FOS	ENSG00000170345	Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796
B12	SBH0216579	ENST00000649631.1	FOXP1	ENSG00000114861	forkhead box P1 Source HGNC Symbol Acc HGNC 3823
C01	SBH0453076	ENST00000393491.7	FOXP2	ENSG00000128573	forkhead box P2 Source HGNC Symbol Acc HGNC 13875
C02	SBH0423236	ENST00000376199.7	FOXP3	ENSG00000049768	forkhead box P3 Source HGNC Symbol Acc HGNC 6106
C03	SBH0349339	ENST00000346208.4	GATA3	ENSG00000107485	GATA binding protein 3 Source HGNC Symbol Acc HGNC 4172
C04	SBH0351472	ENST00000382540.5	GZMB	ENSG00000100453	granzyme B Source HGNC Symbol Acc HGNC 4709
C05	SBH0517526	ENST00000441542.6	HDAC9	ENSG00000048052	histone deacetylase 9 Source HGNC Symbol Acc HGNC 14065
C06	SBH1220076	ENST00000264832.8	ICAM1	ENSG00000090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
C07	SBH0382852	ENST00000435193.1	ICOS	ENSG00000163600	inducible T cell costimulator Source HGNC Symbol Acc HGNC 5351
C08	SBH1220090	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
C09	SBH1220095	ENST00000423557.1	IL10	ENSG00000136634	interleukin 10 Source HGNC Symbol Acc HGNC 5962
C10	SBH0388417	ENST00000227752.7	IL10RA	ENSG00000110324	interleukin 10 receptor subunit alpha Source HGNC Symbol Acc HGNC 5964
		ENST00000304		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0375568	506.7	IL13	169194	interleukin 13 Source HGNC Symbol Acc HGNC 5973
C12	SBH1220101	ENST00000296545.11	IL15	ENSG00000164136	interleukin 15 Source HGNC Symbol Acc HGNC 5977
D01	SBH0451354	ENST00000340057.1	IL17A	ENSG00000112115	interleukin 17A Source HGNC Symbol Acc HGNC 5981
D02	SBH0663647	ENST00000263339.3	IL1A	ENSG00000115008	interleukin 1 alpha Source HGNC Symbol Acc HGNC 5991
D03	SBH0225582	ENST00000226730.4	IL2	ENSG00000109471	interleukin 2 Source HGNC Symbol Acc HGNC 6001
D04	SBH0567688	ENST00000447847.1	IL2RA	ENSG00000134460	interleukin 2 receptor subunit alpha Source HGNC Symbol Acc HGNC 6008
D05	SBH0653267	ENST00000453962.5	IL2RB	ENSG00000100385	interleukin 2 receptor subunit beta Source HGNC Symbol Acc HGNC 6009
D06	SBH0489868	ENST00000377035.1	IL31	ENSG00000204671	interleukin 31 Source HGNC Symbol Acc HGNC 19372
D07	SBH1220109	ENST00000350025.2	IL4	ENSG00000113520	interleukin 4 Source HGNC Symbol Acc HGNC 6014
D08	SBH1220110	ENST00000231454.6	IL5	ENSG00000113525	interleukin 5 Source HGNC Symbol Acc HGNC 6016
D09	SBH1220111	ENST00000401630.7	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D10	SBH0481782	ENST00000514217.5	IL7R	ENSG00000168685	interleukin 7 receptor Source HGNC Symbol Acc HGNC 6024
D11	SBH0663146	ENST00000467678.5	ING4	ENSG00000111653	inhibitor of growth family member 4 Source HGNC Symbol Acc HGNC 19423
D12	SBH0409342	ENST00000380956.9	IRF4	ENSG00000137265	interferon regulatory factor 4 Source HGNC Symbol Acc HGNC 6119
E01	SBH0181121	ENST00000486883.5	ITCH	ENSG00000078747	itchy E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 13890
E02	SBH1220129	ENST00000282588.6	ITGA1	ENSG00000213949	integrin subunit alpha 1 Source HGNC Symbol Acc HGNC 6134
E03	SBH1220142	ENST00000342505.5	JAK1	ENSG00000162434	Janus kinase 1 Source HGNC Symbol Acc HGNC 6190
E04	SBH0438127	ENST00000527670.5	JAK3	ENSG00000105639	Janus kinase 3 Source HGNC Symbol Acc HGNC 6193
E05	SBH0613340	ENST00000371222.3	JUN	ENSG00000177606	Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204
E06	SBH0458385	ENST00000354453.7	LAT	ENSG00000213658	linker for activation of T cells Source HGNC Symbol Acc HGNC 18874
E07	SBH1220169	ENST00000308868.5	LEP	ENSG00000174697	leptin Source HGNC Symbol Acc HGNC 6553
E08	SBH0412667	ENST00000553755.5	LGALS3	ENSG00000131981	galectin 3 Source HGNC Symbol Acc HGNC 6563
E09	SBH0249281	ENST00000418386.2	LTA	ENSG00000226979	lymphotoxin alpha Source HGNC Symbol Acc HGNC 6709
E10	SBH0591485	ENST00000449277.6	MEF2A	ENSG00000068305	myocyte enhancer factor 2A Source HGNC Symbol Acc HGNC 6993
E11	SBH0171265	ENST00000591814.5	NFATC1	ENSG00000131196	nuclear factor of activated T cells 1 Source HGNC Symbol Acc HGNC 7775
E12	SBH0361870	ENST00000609943.5	NFATC2	ENSG00000101096	nuclear factor of activated T cells 2 Source HGNC Symbol Acc HGNC 7776
F01	SBH0604923	ENST00000562171.1	NFATC3	ENSG00000072736	nuclear factor of activated T cells 3 Source HGNC Symbol Acc HGNC 7777
F02	SBH1220264	ENST00000651197.1	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
F03	SBH0408224	ENST00000429731.1	NHLH2	ENSG00000177551	nescient helix-loop-helix 2 Source HGNC Symbol Acc HGNC 7818
F04	SBH0615258	ENST00000277541.7	NOTCH1	ENSG00000148400	notch 1 Source HGNC Symbol Acc HGNC 7881
F05	SBH0300057	ENST00000343705.3	PDCD1	ENSG00000188389	programmed cell death 1 Source HGNC Symbol Acc HGNC 8760
F06	SBH0602829	ENST00000441259.2	PRF1	ENSG00000180644	perforin 1 Source HGNC Symbol Acc HGNC 9360
F07	SBH0670634	ENST00000419486.1	PRKCG	ENSG00000126583	protein kinase C gamma Source HGNC Symbol Acc HGNC 9402
F08	SBH0060846	ENST00000557436.1	PTGER2	ENSG00000125384	prostaglandin E receptor 2 Source HGNC Symbol Acc HGNC 9594
F09	SBH1220344	ENST00000367468.10	PTGS2	ENSG00000073756	prostaglandin-endoperoxide synthase 2 Source HGNC Symbol Acc HGNC 9605
F10	SBH0529430	ENST00000255499.3	RNF128	ENSG00000133135	ring finger protein 128, E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 21153

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0011028	ENST00000236147.5	SELL	ENSG00000188404	selectin L Source HGNC Symbol Acc HGNC 10720
F12	SBH0341614	ENST00000404395.3	STAT3	ENSG00000168610	signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364
G01	SBH1220424	ENST00000300134.8	STAT6	ENSG00000166888	signal transducer and activator of transcription 6 Source HGNC Symbol Acc HGNC 11368
G02	SBH1220435	ENST00000177694.2	TBX21	ENSG00000073861	T-box 21 Source HGNC Symbol Acc HGNC 11599
G03	SBH1220443	ENST00000598758.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G04	SBH1220472	ENST00000221132.7	TNFRSF10A	ENSG00000104689	TNF receptor superfamily member 10a Source HGNC Symbol Acc HGNC 11904
G05	SBH0472908	ENST00000435221.6	TNFRSF14	ENSG00000157873	TNF receptor superfamily member 14 Source HGNC Symbol Acc HGNC 11912
G06	SBH0054416	ENST00000486728.5	TNFRSF18	ENSG00000186891	TNF receptor superfamily member 18 Source HGNC Symbol Acc HGNC 11914
G07	SBH0433585	ENST00000453580.1	TNFRSF4	ENSG00000186827	TNF receptor superfamily member 4 Source HGNC Symbol Acc HGNC 11918
G08	SBH0035846	ENST00000417814.3	TNFRSF8	ENSG00000120949	TNF receptor superfamily member 8 Source HGNC Symbol Acc HGNC 11923
G09	SBH1220476	ENST00000377507.7	TNFRSF9	ENSG00000049249	TNF receptor superfamily member 9 Source HGNC Symbol Acc HGNC 11924
G10	SBH1220477	ENST00000241261.7	TNFSF10	ENSG00000121858	TNF superfamily member 10 Source HGNC Symbol Acc HGNC 11925
G11	SBH1220480	ENST00000599359.1	TNFSF14	ENSG00000125735	TNF superfamily member 14 Source HGNC Symbol Acc HGNC 11930
G12	SBH0593682	ENST00000223795.2	TNFSF8	ENSG00000106952	TNF superfamily member 8 Source HGNC Symbol Acc HGNC 11938
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.

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 or can be requested from QIAGEN Technical Services or your local distributor.