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

Human Ubiquitination (Ubiquitinylation)

Cat. no. 249950 SBHS-079ZA

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	ANAPC11	ANAPC2	ARIH1	ATG7	BARD1	BRCA1	BRCC3	BTRC	CBL	CDC34	CUL1	CUL2
B	CUL3	CUL4A	CUL4B	CUL5	CUL7	CUL9	DDB1	DZIP3	FBXO3	FBXO31	FBXO4	FBXW10
C	FBXW9	HECW1	HECW2	HERC5	HUWE1	MARCH5	MDM2	MIB1	MOCS3	MUL1	NAE1	NEDD8
D	PRKN	COP1	RNF123	RNF148	SAE1	SKP1	SKP2	SMURF1	SMURF2	STUB1	SYVN1	TMEM189
E	TP53	UBA1	UBA2	UBA3	UBA5	UBA6	UBE2A	UBE2B	UBE2C	UBE2D1	UBE2D2	UBE2D3
F	UBE2E1	UBE2E2	UBE2E3	UBE2G1	UBE2G2	UBE2H	UBE2I	UBE2J1	UBE2J2	UBE2K	UBE2L3	UBE2M
G	UBE2N	UBE2Q1	UBE2R2	UBE2S	UBE2T	UBE2W	UBE2Z	UBE4B	UBR1	UBR2	VHL	WWP1
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	SBH0601414	ENST00000574924.6	ANAPC11	ENSG00000141552	anaphase promoting complex subunit 11 Source HGNC Symbol Acc HGNC 14452
A02	SBH0614380	ENST00000495611.1	ANAPC2	ENSG00000176248	anaphase promoting complex subunit 2 Source HGNC Symbol Acc HGNC 19989
A03	SBH0023156	ENST00000570085.5	ARIH1	ENSG00000166233	ariadne RBR E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 689
A04	SBH1219761	ENST00000354956.9	ATG7	ENSG00000197548	autophagy related 7 Source HGNC Symbol Acc HGNC 16935
A05	SBH1219782	ENST00000260947.9	BARD1	ENSG00000138376	BRCA1 associated RING domain 1 Source HGNC Symbol Acc HGNC 952
A06	SBH1219814	ENST00000357654.8	BRCA1	ENSG00000012048	BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100
A07	SBH0490870	ENST00000411985.5	BRCC3	ENSG00000185515	BRCA1/BRCA2-containing complex subunit 3 Source HGNC Symbol Acc HGNC 24185
A08	SBH1219819	ENST00000393441.8	BTRC	ENSG00000166167	beta-transducin repeat containing E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 1144
A09	SBH0174182	ENST00000634840.1	CBL	ENSG00000110395	Cbl proto-oncogene Source HGNC Symbol Acc HGNC 1541
A10	SBH1219867	ENST00000586283.6	CDC34	ENSG00000099804	cell division cycle 34 Source HGNC Symbol Acc HGNC 1734
A11	SBH1219924	ENST00000409469.5	CUL1	ENSG00000055130	cullin 1 Source HGNC Symbol Acc HGNC 2551
A12	SBH1219925	ENST00000374751.7	CUL2	ENSG00000108094	cullin 2 Source HGNC Symbol Acc HGNC 2552
B01	SBH0471279	ENST00000344951.8	CUL3	ENSG00000036257	cullin 3 Source HGNC Symbol Acc HGNC 2553
B02	SBH0299957	ENST00000375441.7	CUL4A	ENSG00000139842	cullin 4A Source HGNC Symbol Acc HGNC 2554
B03	SBH0035979	ENST00000371323.2	CUL4B	ENSG00000158290	cullin 4B Source HGNC Symbol Acc HGNC 2555
B04	SBH0275325	ENST00000532782.1	CUL5	ENSG00000166266	cullin 5 Source HGNC Symbol Acc HGNC 2556
B05	SBH0491488	ENST00000535468.1	CUL7	ENSG00000044090	cullin 7 Source HGNC Symbol Acc HGNC 21024
B06	SBH0117084	ENST00000508656.1	CUL9	ENSG00000112659	cullin 9 Source HGNC Symbol Acc HGNC 15982
B07	SBH0321309	ENST00000301764.11	DDB1	ENSG00000167986	damage specific DNA binding protein 1 Source HGNC Symbol Acc HGNC 2717
B08	SBH1219964	ENST00000463306.1	DZIP3	ENSG00000198919	DAZ interacting zinc finger protein 3 Source HGNC Symbol Acc HGNC 30938
B09	SBH0239226	ENST00000530401.5	FBXO3	ENSG00000110429	F-box protein 3 Source HGNC Symbol Acc HGNC 13582
B10	SBH0093243	ENST00000561664.1	FBXO31	ENSG00000103264	F-box protein 31 Source HGNC Symbol Acc HGNC 16510
B11	SBH0219699	ENST00000509134.1	FBXO4	ENSG00000151876	F-box protein 4 Source HGNC Symbol Acc HGNC 13583
B12	SBH0048778	ENST00000308799.8	FBXW10	ENSG00000171931	F-box and WD repeat domain containing 10 Source HGNC Symbol Acc HGNC 1211
C01	SBH0667120	ENST00000587296.1	FBXW9	ENSG00000132004	F-box and WD repeat domain containing 9 Source HGNC Symbol Acc HGNC 28136
C02	SBH0490213	ENST00000492310.5	HECW1	ENSG00000002746	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 22195
C03	SBH0001119	ENST00000644978.2	HECW2	ENSG00000138411	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2 Source HGNC Symbol Acc HGNC 29853
C04	SBH0564377	ENST00000264350.8	HERC5	ENSG00000138646	HECT and RLD domain containing E3 ubiquitin protein ligase 5 Source HGNC Symbol Acc HGNC 24368
C05	SBH0567478	ENST00000218328.12	HUWE1	ENSG00000086758	HECT, UBA and WWE domain containing 1, E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 30892
C06	SBH0545479	ENST00000467521.6	MARCH5	ENSG00000198060	membrane associated ring-CH-type finger 5 Source HGNC Symbol Acc HGNC 26025
C07	SBH1220207	ENST00000523991.5	MDM2	ENSG00000135679	MDM2 proto-oncogene Source HGNC Symbol Acc HGNC 6973
C08	SBH0199678	ENST00000578260.1	MIB1	ENSG00000101752	mindbomb E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 21086
C09	SBH0482653	ENST00000244051.2	MOCS3	ENSG00000124217	molybdenum cofactor synthesis 3 Source HGNC Symbol Acc HGNC 15765
C10	SBH0543498	ENST00000264198.5	MUL1	ENSG00000090432	mitochondrial E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 25762
		ENST00000290		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0516381	810.8	NAE1	159593	NEDD8 activating enzyme E1 subunit 1 Source HGNC Symbol Acc HGNC 621
C12	SBH0284283	ENST00000527046.5	NEDD8	ENSG00000129559	neural precursor cell expressed, developmentally down-regulated 8 Source HGNC Symbol Acc HGNC 7732
D01	SBH0412425	ENST00000366898.6	PRKN	ENSG00000185345	parkin RBR E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 8607
D02	SBH0654803	ENST00000308769.12	COP1	ENSG00000143207	COP1, E3 ubiquitin ligase Source HGNC Symbol Acc HGNC 17440
D03	SBH0136035	ENST00000487805.6	RNF123	ENSG00000164068	ring finger protein 123 Source HGNC Symbol Acc HGNC 21148
D04	SBH0035218	ENST00000434824.2	RNF148	ENSG00000235631	ring finger protein 148 Source HGNC Symbol Acc HGNC 22411
D05	SBH0022827	ENST00000594144.5	SAE1	ENSG00000142230	SUMO1 activating enzyme subunit 1 Source HGNC Symbol Acc HGNC 30660
D06	SBH0628081	ENST00000521216.5	SKP1	ENSG00000113558	S-phase kinase associated protein 1 Source HGNC Symbol Acc HGNC 10899
D07	SBH1220400	ENST00000274254.9	SKP2	ENSG00000145604	S-phase kinase associated protein 2 Source HGNC Symbol Acc HGNC 10901
D08	SBH0364195	ENST00000361125.1	SMURF1	ENSG00000198742	SMAD specific E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 16807
D09	SBH0110570	ENST00000585301.1	SMURF2	ENSG00000108854	SMAD specific E3 ubiquitin protein ligase 2 Source HGNC Symbol Acc HGNC 16809
D10	SBH0269639	ENST00000564370.5	STUB1	ENSG00000103266	STIP1 homology and U-box containing protein 1 Source HGNC Symbol Acc HGNC 11427
D11	SBH0347726	ENST00000307289.10	SYVN1	ENSG00000162298	synoviolin 1 Source HGNC Symbol Acc HGNC 20738
D12	SBH0405348	ENST00000371656.3	TMEM189	ENSG00000240849	transmembrane protein 189 Source HGNC Symbol Acc HGNC 16735
E01	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
E02	SBH0250405	ENST00000377351.8	UBA1	ENSG00000130985	ubiquitin like modifier activating enzyme 1 Source HGNC Symbol Acc HGNC 12469
E03	SBH0129022	ENST00000590048.6	UBA2	ENSG00000126261	ubiquitin like modifier activating enzyme 2 Source HGNC Symbol Acc HGNC 30661
E04	SBH0069326	ENST00000466763.5	UBA3	ENSG00000144744	ubiquitin like modifier activating enzyme 3 Source HGNC Symbol Acc HGNC 12470
E05	SBH0171666	ENST00000468227.5	UBA5	ENSG00000081307	ubiquitin like modifier activating enzyme 5 Source HGNC Symbol Acc HGNC 23230
E06	SBH0131451	ENST00000420827.2	UBA6	ENSG00000033178	ubiquitin like modifier activating enzyme 6 Source HGNC Symbol Acc HGNC 25581
E07	SBH0085981	ENST00000630695.2	UBE2A	ENSG00000077721	ubiquitin conjugating enzyme E2 A Source HGNC Symbol Acc HGNC 12472
E08	SBH1220501	ENST00000265339.6	UBE2B	ENSG00000119048	ubiquitin conjugating enzyme E2 B Source HGNC Symbol Acc HGNC 12473
E09	SBH0549489	ENST00000243893.10	UBE2C	ENSG00000175063	ubiquitin conjugating enzyme E2 C Source HGNC Symbol Acc HGNC 15937
E10	SBH0143894	ENST00000373910.9	UBE2D1	ENSG00000072401	ubiquitin conjugating enzyme E2 D1 Source HGNC Symbol Acc HGNC 12474
E11	SBH0469108	ENST00000505007.5	UBE2D2	ENSG00000131508	ubiquitin conjugating enzyme E2 D2 Source HGNC Symbol Acc HGNC 12475
E12	SBH0029533	ENST00000350435.11	UBE2D3	ENSG00000109332	ubiquitin conjugating enzyme E2 D3 Source HGNC Symbol Acc HGNC 12476
F01	SBH0606521	ENST00000306627.7	UBE2E1	ENSG00000170142	ubiquitin conjugating enzyme E2 E1 Source HGNC Symbol Acc HGNC 12477
F02	SBH0446135	ENST00000427371.3	UBE2E2	ENSG00000182247	ubiquitin conjugating enzyme E2 E2 Source HGNC Symbol Acc HGNC 12478
F03	SBH0531022	ENST00000602710.5	UBE2E3	ENSG00000170035	ubiquitin conjugating enzyme E2 E3 Source HGNC Symbol Acc HGNC 12479
F04	SBH0282745	ENST00000571980.1	UBE2G1	ENSG00000132388	ubiquitin conjugating enzyme E2 G1 Source HGNC Symbol Acc HGNC 12482
F05	SBH0220204	ENST00000462569.5	UBE2G2	ENSG00000184787	ubiquitin conjugating enzyme E2 G2 Source HGNC Symbol Acc HGNC 12483
F06	SBH0599913	ENST00000472396.5	UBE2H	ENSG00000186591	ubiquitin conjugating enzyme E2 H Source HGNC Symbol Acc HGNC 12484
F07	SBH0417864	ENST00000568209.5	UBE2I	ENSG00000103275	ubiquitin conjugating enzyme E2 I Source HGNC Symbol Acc HGNC 12485
F08	SBH0315173	ENST00000435041.3	UBE2J1	ENSG00000198833	ubiquitin conjugating enzyme E2 J1 Source HGNC Symbol Acc HGNC 17598
F09	SBH0445783	ENST00000471154.1	UBE2J2	ENSG00000160087	ubiquitin conjugating enzyme E2 J2 Source HGNC Symbol Acc HGNC 19268
F10	SBH0427020	ENST00000445950.2	UBE2K	ENSG00000078140	ubiquitin conjugating enzyme E2 K Source HGNC Symbol Acc HGNC 4914

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0162378	ENST00000545681.2	UBE2L3	ENSG00000185651	ubiquitin conjugating enzyme E2 L3 Source HGNC Symbol Acc HGNC 12488
F12	SBH0081552	ENST00000595957.5	UBE2M	ENSG00000130725	ubiquitin conjugating enzyme E2 M Source HGNC Symbol Acc HGNC 12491
G01	SBH1220502	ENST00000549833.1	UBE2N	ENSG00000177889	ubiquitin conjugating enzyme E2 N Source HGNC Symbol Acc HGNC 12492
G02	SBH0302051	ENST00000497453.1	UBE2Q1	ENSG00000160714	ubiquitin conjugating enzyme E2 Q1 Source HGNC Symbol Acc HGNC 15698
G03	SBH0282128	ENST00000263228.4	UBE2R2	ENSG00000107341	ubiquitin conjugating enzyme E2 R2 Source HGNC Symbol Acc HGNC 19907
G04	SBH0101451	ENST00000264552.14	UBE2S	ENSG00000108106	ubiquitin conjugating enzyme E2 S Source HGNC Symbol Acc HGNC 17895
G05	SBH0363885	ENST00000460852.2	UBE2T	ENSG00000077152	ubiquitin conjugating enzyme E2 T Source HGNC Symbol Acc HGNC 25009
G06	SBH0438049	ENST00000517608.5	UBE2W	ENSG00000104343	ubiquitin conjugating enzyme E2 W Source HGNC Symbol Acc HGNC 25616
G07	SBH0400649	ENST00000514948.1	UBE2Z	ENSG00000159202	ubiquitin conjugating enzyme E2 Z Source HGNC Symbol Acc HGNC 25847
G08	SBH0050249	ENST00000475795.5	UBE4B	ENSG00000130939	ubiquitination factor E4B Source HGNC Symbol Acc HGNC 12500
G09	SBH0264421	ENST00000569066.2	UBR1	ENSG00000159459	ubiquitin protein ligase E3 component n-recognin 1 Source HGNC Symbol Acc HGNC 16808
G10	SBH0630433	ENST00000372899.5	UBR2	ENSG00000024048	ubiquitin protein ligase E3 component n-recognin 2 Source HGNC Symbol Acc HGNC 21289
G11	SBH0274412	ENST00000345392.2	VHL	ENSG00000134086	von Hippel-Lindau tumor suppressor Source HGNC Symbol Acc HGNC 12687
G12	SBH0660445	ENST00000520374.5	WWP1	ENSG00000123124	WW domain containing E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 17004
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.