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

Human Ubiquitination (Ubiquitinylation)

Cat. no. 249955 UPHS-079ZR

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

Panel layout (Rotor-Gene): QuantiNova LNA Probe 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 Probe PCR 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 Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH0206529	ENST00000571570.5	ANAPC11	ENSG00000141552	anaphase promoting complex subunit 11 Source HGNC Symbol Acc HGNC 14452
A02	UPFH1132230	ENST00000323927.3	ANAPC2	ENSG00000176248	anaphase promoting complex subunit 2 Source HGNC Symbol Acc HGNC 19989
A03	UPFH0303518	ENST00000562891.2	ARIH1	ENSG00000166233	ariadne RBR E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 689
A04	UPFH0133269	ENST00000354449.7	ATG7	ENSG00000197548	autophagy related 7 Source HGNC Symbol Acc HGNC 16935
A05	UPFH1132268	ENST00000260947.9	BARD1	ENSG00000138376	BRCA1 associated RING domain 1 Source HGNC Symbol Acc HGNC 952
A06	UPFH1132279	ENST00000461574.1	BRCA1	ENSG00000012048	BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100
A07	UPFH0210885	ENST00000620502.4	BRCC3	ENSG00000185515	BRCA1/BRCA2-containing complex subunit 3 Source HGNC Symbol Acc HGNC 24185
A08	UPFH0358747	ENST00000370187.8	BTRC	ENSG00000166167	beta-transducin repeat containing E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 1144
A09	UPFH0561363	ENST00000634840.1	CBL	ENSG00000110395	Cbl proto-oncogene Source HGNC Symbol Acc HGNC 1541
A10	UPFH1132305	ENST00000215574.9	CDC34	ENSG00000099804	cell division cycle 34 Source HGNC Symbol Acc HGNC 1734
A11	UPFH1132345	ENST00000617797.1	CUL1	ENSG00000055130	cullin 1 Source HGNC Symbol Acc HGNC 2551
A12	UPFH1132346	ENST00000374746.5	CUL2	ENSG00000108094	cullin 2 Source HGNC Symbol Acc HGNC 2552
B01	UPFH1132347	ENST00000409096.5	CUL3	ENSG00000036257	cullin 3 Source HGNC Symbol Acc HGNC 2553
B02	UPFH0164612	ENST00000488558.2	CUL4A	ENSG00000139842	cullin 4A Source HGNC Symbol Acc HGNC 2554
B03	UPFH0168005	ENST00000404115.7	CUL4B	ENSG00000158290	cullin 4B Source HGNC Symbol Acc HGNC 2555
B04	UPFH0206926	ENST00000531427.5	CUL5	ENSG00000166266	cullin 5 Source HGNC Symbol Acc HGNC 2556
B05	UPFH0058721	ENST00000265348.7	CUL7	ENSG00000044090	cullin 7 Source HGNC Symbol Acc HGNC 21024
B06	UPFH0492857	ENST00000502719.5	CUL9	ENSG00000112659	cullin 9 Source HGNC Symbol Acc HGNC 15982
B07	UPFH0061420	ENST00000301764.11	DDB1	ENSG00000167986	damage specific DNA binding protein 1 Source HGNC Symbol Acc HGNC 2717
B08	UPFH1132374	ENST00000463306.1	DZIP3	ENSG00000198919	DAZ interacting zinc finger protein 3 Source HGNC Symbol Acc HGNC 30938
B09	UPFH0495681	ENST00000448981.6	FBXO3	ENSG00000110429	F-box protein 3 Source HGNC Symbol Acc HGNC 13582
B10	UPFH0185951	ENST00000311635.12	FBXO31	ENSG00000103264	F-box protein 31 Source HGNC Symbol Acc HGNC 16510
B11	UPFH0258721	ENST00000296812.6	FBXO4	ENSG00000151876	F-box protein 4 Source HGNC Symbol Acc HGNC 13583
B12	UPFH0323278	ENST00000573605.1	FBXW10	ENSG00000171931	F-box and WD repeat domain containing 10 Source HGNC Symbol Acc HGNC 1211
C01	UPFH0297549	ENST00000587296.1	FBXW9	ENSG00000132004	F-box and WD repeat domain containing 9 Source HGNC Symbol Acc HGNC 28136
C02	UPFH0085929	ENST00000395891.7	HECW1	ENSG00000002746	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 22195
C03	UPFH0222410	ENST00000645770.1	HECW2	ENSG00000138411	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2 Source HGNC Symbol Acc HGNC 29853
C04	UPFH0003074	ENST00000510223.5	HERC5	ENSG00000138646	HECT and RLD domain containing E3 ubiquitin protein ligase 5 Source HGNC Symbol Acc HGNC 24368
C05	UPFH0120500	ENST00000446750.1	HUWE1	ENSG00000086758	HECT, UBA and WWE domain containing 1, E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 30892
C06	UPFH0456060	ENST00000358935.3	MARCH5	ENSG00000198060	membrane associated ring-CH-type finger 5 Source HGNC Symbol Acc HGNC 26025
C07	UPFH1132546	ENST00000393416.6	MDM2	ENSG00000135679	MDM2 proto-oncogene Source HGNC Symbol Acc HGNC 6973
C08	UPFH0378993	ENST00000578260.1	MIB1	ENSG00000101752	mindbomb E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 21086
C09	UPFH0056434	ENST00000244051.2	MOCS3	ENSG00000124217	molybdenum cofactor synthesis 3 Source HGNC Symbol Acc HGNC 15765
C10	UPFH0053213	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	UPFH1125511	810.8	NAE1	159593	NEDD8 activating enzyme E1 subunit 1 Source HGNC Symbol Acc HGNC 621
C12	UPFH0388792	ENST00000250495.10	NEDD8	ENSG00000129559	neural precursor cell expressed, developmentally down-regulated 8 Source HGNC Symbol Acc HGNC 7732
D01	UPFH0446501	ENST00000366897.5	PRKN	ENSG00000185345	parkin RBR E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 8607
D02	UPFH0557439	ENST00000367669.8	COP1	ENSG00000143207	COP1, E3 ubiquitin ligase Source HGNC Symbol Acc HGNC 17440
D03	UPFH0611056	ENST00000454491.5	RNF123	ENSG00000164068	ring finger protein 123 Source HGNC Symbol Acc HGNC 21148
D04	UPFH0410571	ENST00000447240.1	RNF148	ENSG00000235631	ring finger protein 148 Source HGNC Symbol Acc HGNC 22411
D05	UPFH0512543	ENST00000270225.11	SAE1	ENSG00000142230	SUMO1 activating enzyme subunit 1 Source HGNC Symbol Acc HGNC 30660
D06	UPFH0251762	ENST00000517625.5	SKP1	ENSG00000113558	S-phase kinase associated protein 1 Source HGNC Symbol Acc HGNC 10899
D07	UPFH1132886	ENST00000274255.10	SKP2	ENSG00000145604	S-phase kinase associated protein 2 Source HGNC Symbol Acc HGNC 10901
D08	UPFH0346334	ENST00000361125.1	SMURF1	ENSG00000198742	SMAD specific E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 16807
D09	UPFH0189490	ENST00000582081.5	SMURF2	ENSG00000108854	SMAD specific E3 ubiquitin protein ligase 2 Source HGNC Symbol Acc HGNC 16809
D10	UPFH0301193	ENST00000566408.5	STUB1	ENSG00000103266	STIP1 homology and U-box containing protein 1 Source HGNC Symbol Acc HGNC 11427
D11	UPFH0460316	ENST00000529207.5	SYVN1	ENSG00000162298	synoviolin 1 Source HGNC Symbol Acc HGNC 20738
D12	UPFH0419613	ENST00000453505.6	TMEM189	ENSG00000240849	transmembrane protein 189 Source HGNC Symbol Acc HGNC 16735
E01	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
E02	UPFH0334418	ENST00000451702.2	UBA1	ENSG00000130985	ubiquitin like modifier activating enzyme 1 Source HGNC Symbol Acc HGNC 12469
E03	UPFH0458947	ENST00000592672.2	UBA2	ENSG00000126261	ubiquitin like modifier activating enzyme 2 Source HGNC Symbol Acc HGNC 30661
E04	UPFH0287189	ENST00000361055.9	UBA3	ENSG00000144744	ubiquitin like modifier activating enzyme 3 Source HGNC Symbol Acc HGNC 12470
E05	UPFH0423328	ENST00000489361.1	UBA5	ENSG00000081307	ubiquitin like modifier activating enzyme 5 Source HGNC Symbol Acc HGNC 23230
E06	UPFH0212764	ENST00000322244.10	UBA6	ENSG00000033178	ubiquitin like modifier activating enzyme 6 Source HGNC Symbol Acc HGNC 25581
E07	UPFH0593504	ENST00000631185.2	UBE2A	ENSG00000077721	ubiquitin conjugating enzyme E2 A Source HGNC Symbol Acc HGNC 12472
E08	UPFH1132975	ENST00000507277.1	UBE2B	ENSG00000119048	ubiquitin conjugating enzyme E2 B Source HGNC Symbol Acc HGNC 12473
E09	UPFH0065253	ENST00000405520.5	UBE2C	ENSG00000175063	ubiquitin conjugating enzyme E2 C Source HGNC Symbol Acc HGNC 15937
E10	UPFH0483908	ENST00000373910.9	UBE2D1	ENSG00000072401	ubiquitin conjugating enzyme E2 D1 Source HGNC Symbol Acc HGNC 12474
E11	UPFH0583055	ENST00000505007.5	UBE2D2	ENSG00000131508	ubiquitin conjugating enzyme E2 D2 Source HGNC Symbol Acc HGNC 12475
E12	UPFH0355269	ENST00000508635.5	UBE2D3	ENSG00000109332	ubiquitin conjugating enzyme E2 D3 Source HGNC Symbol Acc HGNC 12476
F01	UPFH0262332	ENST00000424381.5	UBE2E1	ENSG00000170142	ubiquitin conjugating enzyme E2 E1 Source HGNC Symbol Acc HGNC 12477
F02	UPFH0542018	ENST00000335798.8	UBE2E2	ENSG00000182247	ubiquitin conjugating enzyme E2 E2 Source HGNC Symbol Acc HGNC 12478
F03	UPFH0316087	ENST00000602475.5	UBE2E3	ENSG00000170035	ubiquitin conjugating enzyme E2 E3 Source HGNC Symbol Acc HGNC 12479
F04	UPFH0464396	ENST00000571980.1	UBE2G1	ENSG00000132388	ubiquitin conjugating enzyme E2 G1 Source HGNC Symbol Acc HGNC 12482
F05	UPFH0108733	ENST00000462569.5	UBE2G2	ENSG00000184787	ubiquitin conjugating enzyme E2 G2 Source HGNC Symbol Acc HGNC 12483
F06	UPFH0074276	ENST00000473814.6	UBE2H	ENSG00000186591	ubiquitin conjugating enzyme E2 H Source HGNC Symbol Acc HGNC 12484
F07	UPFH0076606	ENST00000402301.5	UBE2I	ENSG00000103275	ubiquitin conjugating enzyme E2 I Source HGNC Symbol Acc HGNC 12485
F08	UPFH0548450	ENST00000435041.3	UBE2J1	ENSG00000198833	ubiquitin conjugating enzyme E2 J1 Source HGNC Symbol Acc HGNC 17598
F09	UPFH0431624	ENST00000435198.5	UBE2J2	ENSG00000160087	ubiquitin conjugating enzyme E2 J2 Source HGNC Symbol Acc HGNC 19268
F10	UPFH0298785	ENST00000503368.5	UBE2K	ENSG00000078140	ubiquitin conjugating enzyme E2 K Source HGNC Symbol Acc HGNC 4914

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0079382	ENST00000458578.6	UBE2L3	ENSG00000185651	ubiquitin conjugating enzyme E2 L3 Source HGNC Symbol Acc HGNC 12488
F12	UPFH0378336	ENST00000595957.5	UBE2M	ENSG00000130725	ubiquitin conjugating enzyme E2 M Source HGNC Symbol Acc HGNC 12491
G01	UPFH1132934	ENST00000549833.1	UBE2N	ENSG00000177889	ubiquitin conjugating enzyme E2 N Source HGNC Symbol Acc HGNC 12492
G02	UPFH0008139	ENST00000467683.5	UBE2Q1	ENSG00000160714	ubiquitin conjugating enzyme E2 Q1 Source HGNC Symbol Acc HGNC 15698
G03	UPFH0183269	ENST00000263228.4	UBE2R2	ENSG00000107341	ubiquitin conjugating enzyme E2 R2 Source HGNC Symbol Acc HGNC 19907
G04	UPFH0368150	ENST00000589978.1	UBE2S	ENSG00000108106	ubiquitin conjugating enzyme E2 S Source HGNC Symbol Acc HGNC 17895
G05	UPFH0090872	ENST00000367274.9	UBE2T	ENSG00000077152	ubiquitin conjugating enzyme E2 T Source HGNC Symbol Acc HGNC 25009
G06	UPFH0179524	ENST00000602593.5	UBE2W	ENSG00000104343	ubiquitin conjugating enzyme E2 W Source HGNC Symbol Acc HGNC 25616
G07	UPFH0431062	ENST00000508468.2	UBE2Z	ENSG00000159202	ubiquitin conjugating enzyme E2 Z Source HGNC Symbol Acc HGNC 25847
G08	UPFH0307204	ENST00000470736.1	UBE4B	ENSG00000130939	ubiquitination factor E4B Source HGNC Symbol Acc HGNC 12500
G09	UPFH0188555	ENST00000546274.6	UBR1	ENSG00000159459	ubiquitin protein ligase E3 component n-recognin 1 Source HGNC Symbol Acc HGNC 16808
G10	UPFH0471297	ENST00000372899.5	UBR2	ENSG00000024048	ubiquitin protein ligase E3 component n-recognin 2 Source HGNC Symbol Acc HGNC 21289
G11	UPFH0295679	ENST00000256474.2	VHL	ENSG00000134086	von Hippel-Lindau tumor suppressor Source HGNC Symbol Acc HGNC 12687
G12	UPFH0066662	ENST00000265428.4	WWP1	ENSG00000123124	WW domain containing E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 17004
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control

Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
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 Probe RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 µl QuantiNova Probe RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl QN ROX Reference Dye, 1.9 ml Water	208252

*Larger kit sizes available.

The QuantiNova LNA Probe 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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