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

Human DNA Damage Signaling Pathway

Cat. no. 249955 UPHS-029ZA

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 (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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	ABL1	APEX1	ATM	ATR	ATRIP	ATRX	BARD1	BAX	BBC3	BLM	BRCA1	BRIP1
B	CDC25A	CDC25C	CDK7	CDKN1A	CHEK1	CHEK2	CIB1	CRY1	CSNK2A2	DDB1	DDB2	DDIT3
C	ERCC1	ERCC2	EXO1	FANCA	FANCD2	FANCG	FEN1	GADD45A	GADD45G	H2AFX	HUS1	LIG1
D	MAPK12	MBD4	MCPH1	MDC1	MLH1	MLH3	MPG	MRE11	MSH2	MSH3	NBN	NTHL1
E	OGG1	PARP1	PCNA	PMS1	PMS2	PNKP	PPM1D	PPP1R15A	PRKDC	RAD1	RAD17	RAD18
F	RAD21	RAD50	RAD51	RAD51B	RAD9A	RBBP8	REV1	RNF168	RNF8	RPA1	SIRT1	SMC1A
G	SUMO1	TOPBP1	TP53	TP53BP1	TP73	UNG	XPA	XPC	XRCC1	XRCC2	XRCC3	XRCC6
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	UPFH1132770	ENST00000318560.6	ABL1	ENSG00000097007	ABL proto-oncogene 1, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 76
A02	UPFH0321059	ENST00000555414.5	APEX1	ENSG00000100823	apurinic/apyrimidinic endodeoxyribonuclease 1 Source HGNC Symbol Acc HGNC 587
A03	UPFH1132252	ENST00000527805.5	ATM	ENSG00000149311	ATM serine/threonine kinase Source HGNC Symbol Acc HGNC 795
A04	UPFH1132260	ENST00000350721.9	ATR	ENSG00000175054	ATR serine/threonine kinase Source HGNC Symbol Acc HGNC 882
A05	UPFH0008827	ENST00000346691.9	ATRIP	ENSG00000164053	ATR interacting protein Source HGNC Symbol Acc HGNC 33499
A06	UPFH0416302	ENST00000373344.10	ATRX	ENSG00000085224	ATRX, chromatin remodeler Source HGNC Symbol Acc HGNC 886
A07	UPFH1132268	ENST00000260947.9	BARD1	ENSG00000138376	BRCA1 associated RING domain 1 Source HGNC Symbol Acc HGNC 952
A08	UPFH0540159	ENST00000293288.12	BAX	ENSG00000087088	BCL2 associated X, apoptosis regulator Source HGNC Symbol Acc HGNC 959
A09	UPFH0224436	ENST00000439096.2	BBC3	ENSG00000105327	BCL2 binding component 3 Source HGNC Symbol Acc HGNC 17868
A10	UPFH1132273	ENST00000355112.8	BLM	ENSG00000197299	BLM RecQ like helicase Source HGNC Symbol Acc HGNC 1058
A11	UPFH1132279	ENST00000461574.1	BRCA1	ENSG00000012048	BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100
A12	UPFH0603696	ENST00000259008.6	BRIP1	ENSG00000136492	BRCA1 interacting protein C-terminal helicase 1 Source HGNC Symbol Acc HGNC 20473
B01	UPFH0432792	ENST00000302506.7	CDC25A	ENSG00000164045	cell division cycle 25A Source HGNC Symbol Acc HGNC 1725
B02	UPFH1132304	ENST00000513970.5	CDC25C	ENSG00000158402	cell division cycle 25C Source HGNC Symbol Acc HGNC 1727
B03	UPFH1132310	ENST00000256443.8	CDK7	ENSG00000134058	cyclin dependent kinase 7 Source HGNC Symbol Acc HGNC 1778
B04	UPFH0312181	ENST00000244741.9	CDKN1A	ENSG00000124762	cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784
B05	UPFH1132313	ENST00000427383.6	CHEK1	ENSG00000149554	checkpoint kinase 1 Source HGNC Symbol Acc HGNC 1925
B06	UPFH1132314	ENST00000439200.5	CHEK2	ENSG00000183765	checkpoint kinase 2 Source HGNC Symbol Acc HGNC 16627
B07	UPFH0252955	ENST00000328649.10	CIB1	ENSG00000185043	calcium and integrin binding 1 Source HGNC Symbol Acc HGNC 16920
B08	UPFH1132336	ENST00000008527.10	CRY1	ENSG00000008405	cryptochrome circadian regulator 1 Source HGNC Symbol Acc HGNC 2384
B09	UPFH0043887	ENST00000563307.1	CSNK2A2	ENSG00000070770	casein kinase 2 alpha 2 Source HGNC Symbol Acc HGNC 2459
B10	UPFH0061420	ENST00000301764.11	DDB1	ENSG00000167986	damage specific DNA binding protein 1 Source HGNC Symbol Acc HGNC 2717
B11	UPFH0224958	ENST00000256996.8	DDB2	ENSG00000134574	damage specific DNA binding protein 2 Source HGNC Symbol Acc HGNC 2718
B12	UPFH0523891	ENST00000346473.7	DDIT3	ENSG00000175197	DNA damage inducible transcript 3 Source HGNC Symbol Acc HGNC 2726
C01	UPFH0129620	ENST00000300853.7	ERCC1	ENSG00000012061	ERCC excision repair 1, endonuclease non-catalytic subunit Source HGNC Symbol Acc HGNC 3433
C02	UPFH0404848	ENST00000391945.9	ERCC2	ENSG00000104884	ERCC excision repair 2, TFIIH core complex helicase subunit Source HGNC Symbol Acc HGNC 3434
C03	UPFH1132390	ENST00000348581.9	EXO1	ENSG00000174371	exonuclease 1 Source HGNC Symbol Acc HGNC 3511
C04	UPFH1132394	ENST00000389301.8	FANCA	ENSG00000187741	FA complementation group A Source HGNC Symbol Acc HGNC 3582
C05	UPFH0068649	ENST00000287647.7	FANCD2	ENSG00000144554	FA complementation group D2 Source HGNC Symbol Acc HGNC 3585
C06	UPFH0300954	ENST00000378643.7	FANCG	ENSG00000221829	FA complementation group G Source HGNC Symbol Acc HGNC 3588
C07	UPFH1132971	ENST00000305885.3	FEN1	ENSG00000168496	flap structure-specific endonuclease 1 Source HGNC Symbol Acc HGNC 3650
C08	UPFH1132413	ENST00000370985.4	GADD45A	ENSG00000116717	growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095
C09	UPFH1132415	ENST00000375769.1	GADD45G	ENSG00000130222	growth arrest and DNA damage inducible gamma Source HGNC Symbol Acc HGNC 4097
C10	UPFH0604374	ENST00000530167.1	H2AFX	ENSG00000188486	H2A histone family member X Source HGNC Symbol Acc HGNC 4739
		ENST00000258		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH1132461	774.10	HUS1	136273	HUS1 checkpoint clamp component Source HGNC Symbol Acc HGNC 5309
C12	UPFH1132521	ENST00000536218.5	LIG1	ENSG00000105486	DNA ligase 1 Source HGNC Symbol Acc HGNC 6598
D01	UPFH1132533	ENST00000395778.3	MAPK12	ENSG00000188130	mitogen-activated protein kinase 12 Source HGNC Symbol Acc HGNC 6874
D02	UPFH1132537	ENST00000393278.6	MBD4	ENSG00000129071	methyl-CpG binding domain 4, DNA glycosylase Source HGNC Symbol Acc HGNC 6919
D03	UPFH1132541	ENST00000344683.10	MCPH1	ENSG00000147316	microcephalin 1 Source HGNC Symbol Acc HGNC 6954
D04	UPFH1132542	ENST00000376406.8	MDC1	ENSG00000137337	mediator of DNA damage checkpoint 1 Source HGNC Symbol Acc HGNC 21163
D05	UPFH0346001	ENST00000231790.6	MLH1	ENSG00000076242	mutL homolog 1 Source HGNC Symbol Acc HGNC 7127
D06	UPFH0286592	ENST00000380968.6	MLH3	ENSG00000119684	mutL homolog 3 Source HGNC Symbol Acc HGNC 7128
D07	UPFH1132554	ENST00000219431.4	MPG	ENSG00000103152	N-methylpurine DNA glycosylase Source HGNC Symbol Acc HGNC 7211
D08	UPFH1132556	ENST00000323977.7	MRE11	ENSG00000020922	MRE11 homolog, double strand break repair nuclease Source HGNC Symbol Acc HGNC 7230
D09	UPFH0051784	ENST00000233146.6	MSH2	ENSG00000095002	mutS homolog 2 Source HGNC Symbol Acc HGNC 7325
D10	UPFH1132557	ENST00000265081.7	MSH3	ENSG00000113318	mutS homolog 3 Source HGNC Symbol Acc HGNC 7326
D11	UPFH0612261	ENST00000265433.7	NBN	ENSG00000104320	nibrin Source HGNC Symbol Acc HGNC 7652
D12	UPFH0509800	ENST00000219066.5	NTHL1	ENSG00000065057	nth like DNA glycosylase 1 Source HGNC Symbol Acc HGNC 8028
E01	UPFH1132601	ENST00000349503.9	OGG1	ENSG00000114026	8-oxoguanine DNA glycosylase Source HGNC Symbol Acc HGNC 8125
E02	UPFH0203594	ENST00000490921.5	PARP1	ENSG00000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
E03	UPFH1132607	ENST00000379160.3	PCNA	ENSG00000132646	proliferating cell nuclear antigen Source HGNC Symbol Acc HGNC 8729
E04	UPFH0141655	ENST00000441310.6	PMS1	ENSG00000064933	PMS1 homolog 1, mismatch repair system component Source HGNC Symbol Acc HGNC 9121
E05	UPFH0009773	ENST00000265849.12	PMS2	ENSG00000122512	PMS1 homolog 2, mismatch repair system component Source HGNC Symbol Acc HGNC 9122
E06	UPFH1132883	ENST00000600910.5	PNKP	ENSG00000039650	polynucleotide kinase 3 -phosphatase Source HGNC Symbol Acc HGNC 9154
E07	UPFH0483639	ENST00000305921.7	PPM1D	ENSG00000170836	protein phosphatase, Mg2+/Mn2+ dependent 1D Source HGNC Symbol Acc HGNC 9277
E08	UPFH1132630	ENST00000600406.1	PPP1R15A	ENSG00000087074	protein phosphatase 1 regulatory subunit 15A Source HGNC Symbol Acc HGNC 14375
E09	UPFH0575007	ENST00000314191.6	PRKDC	ENSG00000253729	protein kinase, DNA-activated, catalytic subunit Source HGNC Symbol Acc HGNC 9413
E10	UPFH1132649	ENST00000382038.7	RAD1	ENSG00000113456	RAD1 checkpoint DNA exonuclease Source HGNC Symbol Acc HGNC 9806
E11	UPFH0301660	ENST00000514626.1	RAD17	ENSG00000152942	RAD17 checkpoint clamp loader component Source HGNC Symbol Acc HGNC 9807
E12	UPFH1132650	ENST00000264926.7	RAD18	ENSG00000070950	RAD18, E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 18278
F01	UPFH0450827	ENST00000297338.6	RAD21	ENSG00000164754	RAD21 cohesin complex component Source HGNC Symbol Acc HGNC 9811
F02	UPFH1132922	ENST00000416135.5	RAD50	ENSG00000113522	RAD50 double strand break repair protein Source HGNC Symbol Acc HGNC 9816
F03	UPFH1132651	ENST00000532743.6	RAD51	ENSG00000051180	RAD51 recombinase Source HGNC Symbol Acc HGNC 9817
F04	UPFH1132652	ENST00000487270.5	RAD51B	ENSG00000182185	RAD51 paralog B Source HGNC Symbol Acc HGNC 9822
F05	UPFH0394972	ENST00000529100.5	RAD9A	ENSG00000172613	RAD9 checkpoint clamp component A Source HGNC Symbol Acc HGNC 9827
F06	UPFH0107667	ENST00000399722.6	RBBP8	ENSG00000101773	RB binding protein 8, endonuclease Source HGNC Symbol Acc HGNC 9891
F07	UPFH1132655	ENST00000393445.7	REV1	ENSG00000135945	REV1, DNA directed polymerase Source HGNC Symbol Acc HGNC 14060
F08	UPFH0514565	ENST00000318037.3	RNF168	ENSG00000163961	ring finger protein 168 Source HGNC Symbol Acc HGNC 26661
F09	UPFH0239835	ENST00000469731.5	RNF8	ENSG00000112130	ring finger protein 8 Source HGNC Symbol Acc HGNC 10071
F10	UPFH0075285	ENST00000254719.9	RPA1	ENSG00000132383	replication protein A1 Source HGNC Symbol Acc HGNC 10289

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0388476	ENST00000212015.11	SIRT1	ENSG00000096717	sirtuin 1 Source HGNC Symbol Acc HGNC 14929
F12	UPFH0003409	ENST00000322213.8	SMC1A	ENSG00000072501	structural maintenance of chromosomes 1A Source HGNC Symbol Acc HGNC 11111
G01	UPFH0226409	ENST00000392246.6	SUMO1	ENSG00000116030	small ubiquitin-like modifier 1 Source HGNC Symbol Acc HGNC 12502
G02	UPFH1132736	ENST00000642236.1	TOPBP1	ENSG00000163781	DNA topoisomerase II binding protein 1 Source HGNC Symbol Acc HGNC 17008
G03	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G04	UPFH0035611	ENST00000263801.7	TP53BP1	ENSG00000067369	tumor protein p53 binding protein 1 Source HGNC Symbol Acc HGNC 11999
G05	UPFH1132927	ENST00000354437.8	TP73	ENSG00000078900	tumor protein p73 Source HGNC Symbol Acc HGNC 12003
G06	UPFH1132749	ENST00000242576.6	UNG	ENSG00000076248	uracil DNA glycosylase Source HGNC Symbol Acc HGNC 12572
G07	UPFH0073963	ENST00000375128.4	XPA	ENSG00000136936	XPA, DNA damage recognition and repair factor Source HGNC Symbol Acc HGNC 12814
G08	UPFH1132977	ENST00000285021.11	XPC	ENSG00000154767	XPC complex subunit, DNA damage recognition and repair factor Source HGNC Symbol Acc HGNC 12816
G09	UPFH0485797	ENST00000262887.9	XRCC1	ENSG00000073050	X-ray repair cross complementing 1 Source HGNC Symbol Acc HGNC 12828
G10	UPFH1132767	ENST00000359321.2	XRCC2	ENSG00000196584	X-ray repair cross complementing 2 Source HGNC Symbol Acc HGNC 12829
G11	UPFH1132768	ENST00000555055.6	XRCC3	ENSG00000126215	X-ray repair cross complementing 3 Source HGNC Symbol Acc HGNC 12830
G12	UPFH0166937	ENST00000360079.7	XRCC6	ENSG00000196419	X-ray repair cross complementing 6 Source HGNC Symbol Acc HGNC 4055
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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