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

Human DNA Repair

Cat. no. 249955 UPHS-042ZR

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	APEX1	APEX2	ATM	ATR	ATXN3	BRCA1	BRCA2	BRIP1	CCNH	CCNO	CDK7	DDB1
B	DDB2	DMC1	ERCC1	ERCC2	ERCC3	ERCC4	ERCC5	ERCC6	ERCC8	EXO1	FEN1	LIG1
C	LIG3	LIG4	MGMT	MLH1	MLH3	MMS19	MPG	MRE11	MSH2	MSH3	MSH4	MSH5
D	MSH6	MUTYH	NEIL1	NEIL2	NEIL3	NTHL1	OGG1	PARP1	PARP2	PARP3	PMS1	PMS2
E	PNKP	POLB	POLD3	POLL	PRKDC	RAD18	RAD21	RAD23A	RAD23B	RAD50	RAD51	RAD51B
F	RAD51C	RAD51D	RAD52	RAD54L	RFC1	RPA1	RPA3	SLK	SMUG1	TDG	TOP3A	TOP3B
G	TREX1	UNG	XAB2	XPA	XPC	XRCC1	XRCC2	XRCC3	XRCC4	XRCC5	XRCC6	ATP23
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	UPFH0321059	ENST00000555414.5	APEX1	ENSG00000100823	apurinic/apyrimidinic endodeoxyribonuclease 1 Source HGNC Symbol Acc HGNC 587
A02	UPFH0556392	ENST00000471758.1	APEX2	ENSG00000169188	apurinic/apyrimidinic endodeoxyribonuclease 2 Source HGNC Symbol Acc HGNC 17889
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	UPFH0013942	ENST00000502250.5	ATXN3	ENSG00000066427	ataxin 3 Source HGNC Symbol Acc HGNC 7106
A06	UPFH1132279	ENST00000461574.1	BRCA1	ENSG00000012048	BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100
A07	UPFH0304950	ENST00000544455.5	BRCA2	ENSG00000139618	BRCA2, DNA repair associated Source HGNC Symbol Acc HGNC 1101
A08	UPFH0603696	ENST00000259008.6	BRIP1	ENSG00000136492	BRCA1 interacting protein C-terminal helicase 1 Source HGNC Symbol Acc HGNC 20473
A09	UPFH1132301	ENST00000504878.1	CCNH	ENSG00000134480	cyclin H Source HGNC Symbol Acc HGNC 1594
A10	UPFH0585747	ENST00000282572.5	CCNO	ENSG00000152669	cyclin O Source HGNC Symbol Acc HGNC 18576
A11	UPFH1132310	ENST00000256443.8	CDK7	ENSG00000134058	cyclin dependent kinase 7 Source HGNC Symbol Acc HGNC 1778
A12	UPFH0061420	ENST00000301764.11	DDB1	ENSG00000167986	damage specific DNA binding protein 1 Source HGNC Symbol Acc HGNC 2717
B01	UPFH0224958	ENST00000256996.8	DDB2	ENSG00000134574	damage specific DNA binding protein 2 Source HGNC Symbol Acc HGNC 2718
B02	UPFH0337152	ENST00000216024.7	DMC1	ENSG00000100206	DNA meiotic recombinase 1 Source HGNC Symbol Acc HGNC 2927
B03	UPFH0129620	ENST00000300853.7	ERCC1	ENSG00000012061	ERCC excision repair 1, endonuclease non-catalytic subunit Source HGNC Symbol Acc HGNC 3433
B04	UPFH0404848	ENST00000391945.9	ERCC2	ENSG00000104884	ERCC excision repair 2, TFIIH core complex helicase subunit Source HGNC Symbol Acc HGNC 3434
B05	UPFH0176537	ENST00000285398.6	ERCC3	ENSG00000163161	ERCC excision repair 3, TFIIH core complex helicase subunit Source HGNC Symbol Acc HGNC 3435
B06	UPFH0328385	ENST00000311895.7	ERCC4	ENSG00000175595	ERCC excision repair 4, endonuclease catalytic subunit Source HGNC Symbol Acc HGNC 3436
B07	UPFH1132905	ENST00000652225.1	ERCC5	ENSG00000134899	ERCC excision repair 5, endonuclease Source HGNC Symbol Acc HGNC 3437
B08	UPFH0384446	ENST00000355832.10	ERCC6	ENSG00000225830	ERCC excision repair 6, chromatin remodeling factor Source HGNC Symbol Acc HGNC 3438
B09	UPFH0337335	ENST00000643708.1	ERCC8	ENSG00000049167	ERCC excision repair 8, CSA ubiquitin ligase complex subunit Source HGNC Symbol Acc HGNC 3439
B10	UPFH1132390	ENST00000348581.9	EXO1	ENSG00000174371	exonuclease 1 Source HGNC Symbol Acc HGNC 3511
B11	UPFH1132971	ENST00000305885.3	FEN1	ENSG00000168496	flap structure-specific endonuclease 1 Source HGNC Symbol Acc HGNC 3650
B12	UPFH1132521	ENST00000536218.5	LIG1	ENSG00000105486	DNA ligase 1 Source HGNC Symbol Acc HGNC 6598
C01	UPFH0111441	ENST00000585941.5	LIG3	ENSG00000005156	DNA ligase 3 Source HGNC Symbol Acc HGNC 6600
C02	UPFH1132913	ENST00000356922.5	LIG4	ENSG00000174405	DNA ligase 4 Source HGNC Symbol Acc HGNC 6601
C03	UPFH0403444	ENST00000306010.8	MGMT	ENSG00000170430	O-6-methylguanine-DNA methyltransferase Source HGNC Symbol Acc HGNC 7059
C04	UPFH0346001	ENST00000231790.6	MLH1	ENSG00000076242	mutL homolog 1 Source HGNC Symbol Acc HGNC 7127
C05	UPFH0286592	ENST00000380968.6	MLH3	ENSG00000119684	mutL homolog 3 Source HGNC Symbol Acc HGNC 7128
C06	UPFH0182907	ENST00000483626.5	MMS19	ENSG00000155229	MMS19 homolog, cytosolic iron-sulfur assembly component Source HGNC Symbol Acc HGNC 13824
C07	UPFH1132554	ENST00000219431.4	MPG	ENSG00000103152	N-methylpurine DNA glycosylase Source HGNC Symbol Acc HGNC 7211
C08	UPFH1132556	ENST00000323977.7	MRE11	ENSG00000020922	MRE11 homolog, double strand break repair nuclease Source HGNC Symbol Acc HGNC 7230
C09	UPFH0051784	ENST00000233146.6	MSH2	ENSG00000095002	mutS homolog 2 Source HGNC Symbol Acc HGNC 7325
C10	UPFH1132557	ENST00000265081.7	MSH3	ENSG00000113318	mutS homolog 3 Source HGNC Symbol Acc HGNC 7326
		ENST00000263		ENSG00000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0547522	187.4	MSH4	057468	mutS homolog 4 Source HGNC Symbol Acc HGNC 7327
C12	UPFH0352382	ENST00000497269.5	MSH5	ENSG00000204410	mutS homolog 5 Source HGNC Symbol Acc HGNC 7328
D01	UPFH0083669	ENST00000234420.9	MSH6	ENSG00000116062	mutS homolog 6 Source HGNC Symbol Acc HGNC 7329
D02	UPFH0027498	ENST00000481571.5	MUTYH	ENSG00000132781	mutY DNA glycosylase Source HGNC Symbol Acc HGNC 7527
D03	UPFH0177082	ENST00000564784.5	NEIL1	ENSG00000140398	nei like DNA glycosylase 1 Source HGNC Symbol Acc HGNC 18448
D04	UPFH0174092	ENST00000524741.1	NEIL2	ENSG00000154328	nei like DNA glycosylase 2 Source HGNC Symbol Acc HGNC 18956
D05	UPFH0010508	ENST00000264596.4	NEIL3	ENSG00000109674	nei like DNA glycosylase 3 Source HGNC Symbol Acc HGNC 24573
D06	UPFH0509800	ENST00000219066.5	NTHL1	ENSG00000065057	nth like DNA glycosylase 1 Source HGNC Symbol Acc HGNC 8028
D07	UPFH1132601	ENST00000349503.9	OGG1	ENSG00000114026	8-oxoguanine DNA glycosylase Source HGNC Symbol Acc HGNC 8125
D08	UPFH0203594	ENST00000490921.5	PARP1	ENSG00000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
D09	UPFH0154861	ENST00000527915.5	PARP2	ENSG00000129484	poly(ADP-ribose) polymerase 2 Source HGNC Symbol Acc HGNC 272
D10	UPFH0050140	ENST00000417220.6	PARP3	ENSG00000041880	poly(ADP-ribose) polymerase family member 3 Source HGNC Symbol Acc HGNC 273
D11	UPFH0141655	ENST00000441310.6	PMS1	ENSG00000064933	PMS1 homolog 1, mismatch repair system component Source HGNC Symbol Acc HGNC 9121
D12	UPFH0009773	ENST00000265849.12	PMS2	ENSG00000122512	PMS1 homolog 2, mismatch repair system component Source HGNC Symbol Acc HGNC 9122
E01	UPFH1132883	ENST00000600910.5	PNKP	ENSG00000039650	polynucleotide kinase 3 -phosphatase Source HGNC Symbol Acc HGNC 9154
E02	UPFH1132832	ENST00000521290.5	POLB	ENSG00000070501	DNA polymerase beta Source HGNC Symbol Acc HGNC 9174
E03	UPFH0254379	ENST00000532497.5	POLD3	ENSG00000077514	DNA polymerase delta 3, accessory subunit Source HGNC Symbol Acc HGNC 20932
E04	UPFH0466851	ENST00000485369.5	POLL	ENSG00000166169	DNA polymerase lambda Source HGNC Symbol Acc HGNC 9184
E05	UPFH0575007	ENST00000314191.6	PRKDC	ENSG00000253729	protein kinase, DNA-activated, catalytic subunit Source HGNC Symbol Acc HGNC 9413
E06	UPFH1132650	ENST00000264926.7	RAD18	ENSG00000070950	RAD18, E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 18278
E07	UPFH0450827	ENST00000297338.6	RAD21	ENSG00000164754	RAD21 cohesin complex component Source HGNC Symbol Acc HGNC 9811
E08	UPFH0246466	ENST00000588826.2	RAD23A	ENSG00000179262	RAD23 homolog A, nucleotide excision repair protein Source HGNC Symbol Acc HGNC 9812
E09	UPFH0192681	ENST00000416373.6	RAD23B	ENSG00000119318	RAD23 homolog B, nucleotide excision repair protein Source HGNC Symbol Acc HGNC 9813
E10	UPFH1132922	ENST00000416135.5	RAD50	ENSG00000113522	RAD50 double strand break repair protein Source HGNC Symbol Acc HGNC 9816
E11	UPFH1132651	ENST00000532743.6	RAD51	ENSG00000051180	RAD51 recombinase Source HGNC Symbol Acc HGNC 9817
E12	UPFH1132652	ENST00000487270.5	RAD51B	ENSG00000182185	RAD51 paralog B Source HGNC Symbol Acc HGNC 9822
F01	UPFH0177325	ENST00000581221.5	RAD51C	ENSG00000108384	RAD51 paralog C Source HGNC Symbol Acc HGNC 9820
F02	UPFH0436059	ENST00000415064.6	RAD51D	ENSG00000185379	RAD51 paralog D Source HGNC Symbol Acc HGNC 9823
F03	UPFH0505817	ENST00000430095.6	RAD52	ENSG00000002016	RAD52 homolog, DNA repair protein Source HGNC Symbol Acc HGNC 9824
F04	UPFH0032783	ENST00000493985.5	RAD54L	ENSG00000085999	RAD54 like Source HGNC Symbol Acc HGNC 9826
F05	UPFH0174657	ENST00000504849.5	RFC1	ENSG00000035928	replication factor C subunit 1 Source HGNC Symbol Acc HGNC 9969
F06	UPFH0075285	ENST00000254719.9	RPA1	ENSG00000132383	replication protein A1 Source HGNC Symbol Acc HGNC 10289
F07	UPFH0387863	ENST00000406109.5	RPA3	ENSG00000106399	replication protein A3 Source HGNC Symbol Acc HGNC 10291
F08	UPFH0022887	ENST00000369755.4	SLK	ENSG00000065613	STE20 like kinase Source HGNC Symbol Acc HGNC 11088
F09	UPFH0292707	ENST00000514196.5	SMUG1	ENSG00000123415	single-strand-selective monofunctional uracil-DNA glycosylase 1 Source HGNC Symbol Acc HGNC 17148
F10	UPFH0582188	ENST00000266775.13	TDG	ENSG00000139372	thymine DNA glycosylase Source HGNC Symbol Acc HGNC 11700

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0361959	ENST00000472959.5	TOP3A	ENSG00000177302	DNA topoisomerase III alpha Source HGNC Symbol Acc HGNC 11992
F12	UPFH0607937	ENST00000398793.6	TOP3B	ENSG00000100038	DNA topoisomerase III beta Source HGNC Symbol Acc HGNC 11993
G01	UPFH1139428	ENST00000625293.3	TREX1	ENSG00000213689	three prime repair exonuclease 1 Source HGNC Symbol Acc HGNC 12269
G02	UPFH1132749	ENST00000242576.6	UNG	ENSG00000076248	uracil DNA glycosylase Source HGNC Symbol Acc HGNC 12572
G03	UPFH0040367	ENST00000358368.5	XAB2	ENSG00000076924	XPA binding protein 2 Source HGNC Symbol Acc HGNC 14089
G04	UPFH0073963	ENST00000375128.4	XPA	ENSG00000136936	XPA, DNA damage recognition and repair factor Source HGNC Symbol Acc HGNC 12814
G05	UPFH1132977	ENST00000285021.11	XPC	ENSG00000154767	XPC complex subunit, DNA damage recognition and repair factor Source HGNC Symbol Acc HGNC 12816
G06	UPFH0485797	ENST00000262887.9	XRCC1	ENSG00000073050	X-ray repair cross complementing 1 Source HGNC Symbol Acc HGNC 12828
G07	UPFH1132767	ENST00000359321.2	XRCC2	ENSG00000196584	X-ray repair cross complementing 2 Source HGNC Symbol Acc HGNC 12829
G08	UPFH1132768	ENST00000555055.6	XRCC3	ENSG00000126215	X-ray repair cross complementing 3 Source HGNC Symbol Acc HGNC 12830
G09	UPFH0204932	ENST00000282268.7	XRCC4	ENSG00000152422	X-ray repair cross complementing 4 Source HGNC Symbol Acc HGNC 12831
G10	UPFH0135513	ENST00000392132.7	XRCC5	ENSG00000079246	X-ray repair cross complementing 5 Source HGNC Symbol Acc HGNC 12833
G11	UPFH0166937	ENST00000360079.7	XRCC6	ENSG00000196419	X-ray repair cross complementing 6 Source HGNC Symbol Acc HGNC 4055
G12	UPFH0426498	ENST00000546709.1	ATP23	ENSG00000166896	ATP23 metallopeptidase and ATP synthase assembly factor homolog Source HGNC Symbol Acc HGNC 29452
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.

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.