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

Rat DNA Damage Signaling Pathway

Cat. no. 249955 UPRN-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	LOC100909750	Apex1	Atm	Atrx	Bard1	Bax	Bcl3	Blm	Brca1	Brca2	Cdc25a	Cdc25c
B	Cdkn1a	Sit3a	Chek2	Csnk2a2	Dclre1a	Ddb2	Ddit3	Ercc1	Ercc2	Exo1	Fanca	Fancc
C	Fancd2	Fancg	Fen1	Gadd45a	Gadd45g	Hus1	Lig1	Mbd4	Mgmt	LOC103694877	Mlh1	Mlh3
D	Mpg	Mre11a	Msh2	Msh3	Nbn	Nthl1	Ogg1	Parp1	Parp2	Pcna	Pms1	Pms2
E	Pold3	Pole	Polh	Poli	Ppm1d	Ppp1r15a	Prkdc	Pttg1	Rad1	Rad17	Rad18	Rad21
F	Rad50	Rad51	Rad51c	Rad51b	Rad52	Rad9a	Rev1	Rnf8	Rpa1	AABR07044925.1	Smc1a	Smc3
G	Sumo1	Terf1	Topbp1	Tp53	Tp53bp1	Ung	Wrn	Wrnip1	Xpc	Xrcc1	Xrcc2	Xrcc6
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1117746	ENSRNOT00000042495.5	LOC100909750	ENSRNOG00000047356	tyrosine-protein kinase ABL1-like Source RGD Symbol Acc 6502032
A02	UPFR1104048	ENSRNOT00000087958.1	Apex1	ENSRNOG00000009663	apurinic/apyrimidinic endodeoxyribonuclease 1 Source RGD Symbol Acc 2126
A03	UPFR1064948	ENSRNOT00000086812.1	Atm	ENSRNOG00000029773	ATM serine/threonine kinase Source RGD Symbol Acc 1593265
A04	UPFR1051451	ENSRNOT00000091284.1	Atrx	ENSRNOG00000056703	ATRX, chromatin remodeler Source RGD Symbol Acc 619795
A05	UPFR1068418	ENSRNOT00000087870.1	Bard1	ENSRNOG00000014960	BRCA1 associated RING domain 1 Source RGD Symbol Acc 621072
A06	UPFR1074536	ENSRNOT00000028328.5	Bax	ENSRNOG00000020876	BCL2 associated X, apoptosis regulator Source RGD Symbol Acc 2192
A07	UPFR1035458	ENSRNOT00000025913.6	Bcl3	ENSRNOG00000043416	BCL3, transcription coactivator Source RGD Symbol Acc 1589465
A08	UPFR1014979	ENSRNOT00000015065.7	Blm	ENSRNOG00000011213	BLM RecQ like helicase Source RGD Symbol Acc 1308810
A09	UPFR1018614	ENSRNOT00000083111.1	Brca1	ENSRNOG00000020701	BRCA1, DNA repair associated Source RGD Symbol Acc 2218
A10	UPFR1085218	ENSRNOT00000001475.7	Brca2	ENSRNOG00000001111	BRCA2, DNA repair associated Source RGD Symbol Acc 2219
A11	UPFR1024541	ENSRNOT00000028141.7	Cdc25a	ENSRNOG00000020737	cell division cycle 25A Source RGD Symbol Acc 621498
A12	UPFR1053484	ENSRNOT00000037368.6	Cdc25c	ENSRNOG00000024008	cell division cycle 25C Source RGD Symbol Acc 1311875
B01	UPFR1028644	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG00000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B02	UPFR1067768	ENSRNOT00000082086.1	Stt3a	ENSRNOG00000031896	STT3A, catalytic subunit of the oligosaccharyltransferase complex Source RGD Symbol Acc 1565793
B03	UPFR1077555	ENSRNOT00000085591.1	Chek2	ENSRNOG00000037509	checkpoint kinase 2 Source RGD Symbol Acc 621543
B04	UPFR1028007	ENSRNOT00000016386.7	Csnk2a2	ENSRNOG00000011933	casein kinase 2 alpha 2 Source RGD Symbol Acc 1306882
B05	UPFR1063879	ENSRNOT00000036321.5	Dclre1a	ENSRNOG00000026204	DNA cross-link repair 1A Source RGD Symbol Acc 1306156
B06	UPFR1019734	ENSRNOT00000018998.8	Ddb2	ENSRNOG00000014071	damage specific DNA binding protein 2 Source RGD Symbol Acc 1310164
B07	UPFR1119718	ENSRNOT00000008941.5	Ddit3	ENSRNOG00000006789	DNA-damage inducible transcript 3 Source RGD Symbol Acc 62391
B08	UPFR1053097	ENSRNOT00000024113.5	Ercc1	ENSRNOG00000017839	ERCC excision repair 1, endonuclease non-catalytic subunit Source RGD Symbol Acc 1306992
B09	UPFR1023073	ENSRNOT00000024246.7	Ercc2	ENSRNOG00000017753	ERCC excision repair 2, TFIIH core complex helicase subunit Source RGD Symbol Acc 1309109
B10	UPFR1061168	ENSRNOT00000088204.1	Exo1	ENSRNOG00000056209	exonuclease 1 Source RGD Symbol Acc 1309465
B11	UPFR1034527	ENSRNOT00000022658.7	Fanca	ENSRNOG00000016706	FA complementation group A Source RGD Symbol Acc 1311380
B12	UPFR1115266	ENSRNOT00000022884.6	Fancc	ENSRNOG00000016889	FA complementation group C Source RGD Symbol Acc 2593
C01	UPFR1025811	ENSRNOT00000082618.1	Fancd2	ENSRNOG00000061085	FA complementation group D2 Source RGD Symbol Acc 1303172
C02	UPFR1109133	ENSRNOT00000078082.1	Fancg	ENSRNOG00000057945	FA complementation group G Source RGD Symbol Acc 1587477
C03	UPFR1032733	ENSRNOT00000027842.3	Fen1	ENSRNOG00000020531	flap structure-specific endonuclease 1 Source RGD Symbol Acc 621821
C04	UPFR1092990	ENSRNOT00000007698.6	Gadd45a	ENSRNOG00000005615	growth arrest and DNA-damage-inducible, alpha Source RGD Symbol Acc 2654
C05	UPFR1119739	ENSRNOT00000018252.7	Gadd45g	ENSRNOG00000013090	growth arrest and DNA-damage-inducible, gamma Source RGD Symbol Acc 1311796
C06	UPFR1092540	ENSRNOT00000006852.7	Hus1	ENSRNOG00000005141	HUS1 checkpoint clamp component Source RGD Symbol Acc 1591976
C07	UPFR1104235	ENSRNOT00000019799.6	Lig1	ENSRNOG00000014193	DNA ligase 1 Source RGD Symbol Acc 621424
C08	UPFR1052576	ENSRNOT00000014537.7	Mbd4	ENSRNOG00000010919	methyl-CpG binding domain 4 DNA glycosylase Source RGD Symbol Acc 1585874
C09	UPFR1110488	ENSRNOT00000021537.4	Mgmt	ENSRNOG00000016038	O-6-methylguanine-DNA methyltransferase Source RGD Symbol Acc 3087
C10	UPFR1126542	ENSRNOT00000008608.4	LOC103694877	ENSRNOG00000006589	macrophage migration inhibitory factor Source RGD Symbol Acc 621163
		ENSRNOT00000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1102175	064581.1	Mlh1	000033809	mutL homolog 1 Source RGD Symbol Acc 620937
C12	UPFR1105736	ENSRNOT00000033493.3	Mlh3	ENSRNOG00000006699	mutL homolog 3 Source RGD Symbol Acc 1309227
D01	UPFR1046401	ENSRNOT00000027940.4	Mpg	ENSRNOG00000020571	N-methylpurine-DNA glycosylase Source RGD Symbol Acc 3106
D02	UPFR1015459	ENSRNOT00000012940.4	Mre11a	ENSRNOG00000009506	MRE11 homolog A, double strand break repair nuclease Source RGD Symbol Acc 69263
D03	UPFR1084978	ENSRNOT00000021538.7	Msh2	ENSRNOG00000015796	mutS homolog 2 Source RGD Symbol Acc 620786
D04	UPFR1101725	ENSRNOT00000018449.7	Msh3	ENSRNOG00000013673	mutS homolog 3 Source RGD Symbol Acc 1563954
D05	UPFR1078597	ENSRNOT00000012377.4	Nbn	ENSRNOG00000008580	nibrin Source RGD Symbol Acc 621420
D06	UPFR1115242	ENSRNOT00000016490.6	Nthl1	ENSRNOG00000012213	nth-like DNA glycosylase 1 Source RGD Symbol Acc 1309289
D07	UPFR1109071	ENSRNOT00000085766.1	Ogg1	ENSRNOG00000052140	8-oxoguanine DNA glycosylase Source RGD Symbol Acc 621168
D08	UPFR1022638	ENSRNOT00000004232.5	Parp1	ENSRNOG00000003084	poly (ADP-ribose) polymerase 1 Source RGD Symbol Acc 2053
D09	UPFR1118434	ENSRNOT00000011840.6	Parp2	ENSRNOG00000008892	poly (ADP-ribose) polymerase 2 Source RGD Symbol Acc 1310568
D10	UPFR1093185	ENSRNOT00000028887.6	Pcna	ENSRNOG00000021264	proliferating cell nuclear antigen Source RGD Symbol Acc 3269
D11	UPFR1021702	ENSRNOT00000043714.4	Pms1	ENSRNOG00000004076	PMS1 homolog 1, mismatch repair system component Source RGD Symbol Acc 1359511
D12	UPFR1042893	ENSRNOT00000078603.2	Pms2	ENSRNOG00000001040	PMS1 homolog 2, mismatch repair system component Source RGD Symbol Acc 1305483
E01	UPFR1047824	ENSRNOT00000024875.6	Pold3	ENSRNOG00000018411	DNA polymerase delta 3, accessory subunit Source RGD Symbol Acc 1312027
E02	UPFR1028452	ENSRNOT00000067453.3	Pole	ENSRNOG00000037449	DNA polymerase epsilon, catalytic subunit Source RGD Symbol Acc 1594540
E03	UPFR1117740	ENSRNOT00000026049.3	Polh	ENSRNOG00000019195	DNA polymerase eta Source RGD Symbol Acc 1309893
E04	UPFR1026364	ENSRNOT00000016189.6	Poli	ENSRNOG00000012111	DNA polymerase iota Source RGD Symbol Acc 1305212
E05	UPFR1052968	ENSRNOT00000004540.6	Ppm1d	ENSRNOG00000003329	protein phosphatase, Mg2+/Mn2+ dependent, 1D Source RGD Symbol Acc 1305460
E06	UPFR1020390	ENSRNOT00000044788.4	Ppp1r15a	ENSRNOG00000020938	protein phosphatase 1, regulatory subunit 15A Source RGD Symbol Acc 621526
E07	UPFR1035960	ENSRNOT00000035247.7	Prkdc	ENSRNOG00000025028	protein kinase, DNA-activated, catalytic subunit Source RGD Symbol Acc 1308982
E08	UPFR1075984	ENSRNOT00000005070.5	Pttg1	ENSRNOG00000003802	pituitary tumor-transforming 1 Source RGD Symbol Acc 68359
E09	UPFR1030648	ENSRNOT00000024557.6	Rad1	ENSRNOG00000018063	RAD1 checkpoint DNA exonuclease Source RGD Symbol Acc 1306496
E10	UPFR1120798	ENSRNOT00000024801.4	Rad17	ENSRNOG00000018353	RAD17 checkpoint clamp loader component Source RGD Symbol Acc 1309515
E11	UPFR1099912	ENSRNOT00000066468.2	Rad18	ENSRNOG00000005907	RAD18 E3 ubiquitin protein ligase Source RGD Symbol Acc 1306993
E12	UPFR1038991	ENSRNOT00000006209.5	Rad21	ENSRNOG00000004420	RAD21 cohesin complex component Source RGD Symbol Acc 1594529
F01	UPFR1036827	ENSRNOT00000063772.2	Rad50	ENSRNOG00000033065	RAD50 double strand break repair protein Source RGD Symbol Acc 621542
F02	UPFR1036915	ENSRNOT00000056432.2	Rad51	ENSRNOG00000037302	RAD51 recombinase Source RGD Symbol Acc 1563603
F03	UPFR1107431	ENSRNOT00000008846.5	Rad51c	ENSRNOG00000006661	RAD51 paralog C Source RGD Symbol Acc 1563765
F04	UPFR1103496	ENSRNOT00000087132.1	Rad51b	ENSRNOG00000059245	RAD51 paralog B Source MGI Symbol Acc MGI 1099436
F05	UPFR1021957	ENSRNOT00000076062.2	Rad52	ENSRNOG00000009742	RAD52 homolog, DNA repair protein Source RGD Symbol Acc 1304975
F06	UPFR1020465	ENSRNOT00000025317.5	Rad9a	ENSRNOG00000018729	RAD9 checkpoint clamp component A Source RGD Symbol Acc 2319938
F07	UPFR1077793	ENSRNOT00000067197.2	Rev1	ENSRNOG00000018623	REV1, DNA directed polymerase Source RGD Symbol Acc 1306715
F08	UPFR1019737	ENSRNOT00000081715.1	Rnf8	ENSRNOG00000047171	ring finger protein 8 Source RGD Symbol Acc 1308035
F09	UPFR1121749	ENSRNOT00000090262.1	Rpa1	ENSRNOG00000003123	replication protein A1 Source RGD Symbol Acc 1307376
F10	UPFR1112360	ENSRNOT00000078739.1	AABR07044925.1	ENSRNOG00000051592	sirtuin 1 Source NCBI gene Acc 309757

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1121562	ENSRNOT00000004364.7	Smc1a	ENSRNOG00000003139	structural maintenance of chromosomes 1A Source RGD Symbol Acc 61991
F12	UPFR1080035	ENSRNOT00000019560.7	Smc3	ENSRNOG00000014173	structural maintenance of chromosomes 3 Source RGD Symbol Acc 62006
G01	UPFR1073030	ENSRNOT00000022047.5	Sumo1	ENSRNOG00000016133	small ubiquitin-like modifier 1 Source RGD Symbol Acc 1306919
G02	UPFR1097355	ENSRNOT00000049741.2	Terf1	ENSRNOG00000007291	telomeric repeat binding factor 1 Source RGD Symbol Acc 1311574
G03	UPFR1055514	ENSRNOT00000013265.7	Topbp1	ENSRNOG00000009789	DNA topoisomerase II binding protein 1 Source RGD Symbol Acc 1562949
G04	UPFR1095007	ENSRNOT00000085115.1	Tp53	ENSRNOG00000010756	tumor protein p53 Source RGD Symbol Acc 3889
G05	UPFR1103017	ENSRNOT00000019025.8	Tp53bp1	ENSRNOG00000013837	tumor protein p53 binding protein 1 Source RGD Symbol Acc 1308039
G06	UPFR1120516	ENSRNOT00000056865.3	Ung	ENSRNOG00000000692	uracil-DNA glycosylase Source RGD Symbol Acc 1307200
G07	UPFR1120697	ENSRNOT00000058805.5	Wrn	ENSRNOG00000015440	Werner syndrome RecQ like helicase Source RGD Symbol Acc 1564788
G08	UPFR1061351	ENSRNOT00000023332.5	Wrnip1	ENSRNOG00000017040	Werner helicase interacting protein 1 Source RGD Symbol Acc 628836
G09	UPFR1016280	ENSRNOT00000011490.3	Xpc	ENSRNOG00000008274	XPC complex subunit, DNA damage recognition and repair factor Source RGD Symbol Acc 1305760
G10	UPFR1052544	ENSRNOT00000027057.5	Xrcc1	ENSRNOG00000019915	X-ray repair cross complementing 1 Source RGD Symbol Acc 619823
G11	UPFR1046683	ENSRNOT00000010025.7	Xrcc2	ENSRNOG00000007493	X-ray repair cross complementing 2 Source RGD Symbol Acc 1564823
G12	UPFR1051599	ENSRNOT00000066849.1	Xrcc6	ENSRNOG00000006392	X-ray repair cross complementing 6 Source RGD Symbol Acc 2643
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG00000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG00000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG00000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG00000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG00000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	UPFR1126610	UPL_RGDC	RGDC	UPL_RGDC	Rat 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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