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

Rat DNA Repair

Cat. no. 249955 UPRN-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	Alkbh2	Alkbh3	Apex1	Atm	Atxn3	Blm	Brca1	Brca2	Ccnh	Cdk7	Dclre1a	Dclre1b
B	Ddb1	Ddb2	Dmc1	Ercc1	Ercc2	Ercc3	AABR0702900 2.2	Ercc5	Ercc6	Ercc8	Exo1	Fen1
C	Gen1	Lig1	Lig3	Lig4	Msh6	Mgmt	Mlh1	Mlh3	Mpg	Mre11a	Msh2	Msh3
D	Msh5	Mus81	Mutyh	Neil1	Neil2	Nhej1	Nthl1	Ogg1	Parp1	Parp2	Parp3	Pms1
E	Pms2	Pnkp	Polb	Pold3	Poll	Prkdc	Rad18	Rad21	Rad23a	Rad23b	Rad50	Rad51
F	Rad51c	Rad51d	Rad52	Rad54l	Rad9b	Rfc1	Rpa1	Rpa3	Slk	Smug1	Tdg	Top3a
G	Top3b	Trex1	Trex2	Ung	Xab2	Xpc	Xrcc1	Xrcc2	Xrcc4	Xrcc5	Xrcc6	Atp23
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	UPFR1111988	ENSRNOT00000090277.1	Alkbh2	ENSRNOG00000028584	alkB homolog 2, alpha-ketoglutarate-dependent dioxygenase Source RGD Symbol Acc 1306377
A02	UPFR1111674	ENSRNOT00000030784.5	Alkbh3	ENSRNOG00000021678	alkB homolog 3, alpha-ketoglutarate-dependent dioxygenase Source RGD Symbol Acc 1359731
A03	UPFR1104048	ENSRNOT00000087958.1	Apex1	ENSRNOG00000009663	apurinic/apyrimidinic endodeoxyribonuclease 1 Source RGD Symbol Acc 2126
A04	UPFR1064948	ENSRNOT00000086812.1	Atm	ENSRNOG00000029773	ATM serine/threonine kinase Source RGD Symbol Acc 1593265
A05	UPFR1071648	ENSRNOT00000007505.2	Atxn3	ENSRNOG00000005470	ataxin 3 Source RGD Symbol Acc 621567
A06	UPFR1014979	ENSRNOT00000015065.7	Blm	ENSRNOG00000011213	BLM RecQ like helicase Source RGD Symbol Acc 1308810
A07	UPFR1018614	ENSRNOT00000083111.1	Brca1	ENSRNOG00000020701	BRCA1, DNA repair associated Source RGD Symbol Acc 2218
A08	UPFR1085218	ENSRNOT00000001475.7	Brca2	ENSRNOG00000001111	BRCA2, DNA repair associated Source RGD Symbol Acc 2219
A09	UPFR1115974	ENSRNOT00000049423.1	Ccnh	ENSRNOG00000031656	cyclin H Source RGD Symbol Acc 69419
A10	UPFR1028300	ENSRNOT00000025026.8	Cdk7	ENSRNOG00000018510	cyclin-dependent kinase 7 Source RGD Symbol Acc 621124
A11	UPFR1063879	ENSRNOT00000036321.5	Dclre1a	ENSRNOG00000026204	DNA cross-link repair 1A Source RGD Symbol Acc 1306156
A12	UPFR1025612	ENSRNOT00000080702.1	Dclre1b	ENSRNOG00000019367	DNA cross-link repair 1B Source RGD Symbol Acc 1310343
B01	UPFR1086719	ENSRNOT00000028188.7	Ddb1	ENSRNOG00000020715	damage-specific DNA binding protein 1 Source RGD Symbol Acc 621889
B02	UPFR1019734	ENSRNOT00000018998.8	Ddb2	ENSRNOG00000014071	damage specific DNA binding protein 2 Source RGD Symbol Acc 1310164
B03	UPFR1078313	ENSRNOT00000018526.5	Dmc1	ENSRNOG00000013807	DNA meiotic recombinase 1 Source RGD Symbol Acc 1307611
B04	UPFR1053097	ENSRNOT00000024113.5	Ercc1	ENSRNOG00000017839	ERCC excision repair 1, endonuclease non-catalytic subunit Source RGD Symbol Acc 1306992
B05	UPFR1023073	ENSRNOT00000024246.7	Ercc2	ENSRNOG00000017753	ERCC excision repair 2, TFIIH core complex helicase subunit Source RGD Symbol Acc 1309109
B06	UPFR1108612	ENSRNOT00000018422.6	Ercc3	ENSRNOG00000013180	ERCC excision repair 3, TFIIH core complex helicase subunit Source RGD Symbol Acc 1307139
B07	UPFR1084293	ENSRNOT00000004563.6	AABR07029002.2	ENSRNOG00000048121	ERCC excision repair 4, endonuclease catalytic subunit Source NCBI gene Acc 304719
B08	UPFR1105795	ENSRNOT00000059349.4	Ercc5	ENSRNOG00000022812	ERCC excision repair 5, endonuclease Source RGD Symbol Acc 1586176
B09	UPFR1063323	ENSRNOT00000088529.1	Ercc6	ENSRNOG00000030017	ERCC excision repair 6, chromatin remodeling factor Source RGD Symbol Acc 1311509
B10	UPFR1021592	ENSRNOT00000013598.5	Ercc8	ENSRNOG00000009968	ERCC excision repair 8, CSA ubiquitin ligase complex subunit Source RGD Symbol Acc 1311570
B11	UPFR1061168	ENSRNOT00000088204.1	Exo1	ENSRNOG00000056209	exonuclease 1 Source RGD Symbol Acc 1309465
B12	UPFR1032733	ENSRNOT00000027842.3	Fen1	ENSRNOG00000020531	flap structure-specific endonuclease 1 Source RGD Symbol Acc 621821
C01	UPFR1014017	ENSRNOT00000006470.4	Gen1	ENSRNOG00000004667	GEN1 Holliday junction 5 flap endonuclease Source RGD Symbol Acc 1559792
C02	UPFR1104235	ENSRNOT00000019799.6	Lig1	ENSRNOG00000014193	DNA ligase 1 Source RGD Symbol Acc 621424
C03	UPFR1079596	ENSRNOT00000084076.1	Lig3	ENSRNOG00000021815	DNA ligase 3 Source RGD Symbol Acc 1309875
C04	UPFR1084917	ENSRNOT00000019615.5	Lig4	ENSRNOG00000014605	DNA ligase 4 Source RGD Symbol Acc 1304639
C05	UPFR1039787	ENSRNOT00000093689.1	Msh6	ENSRNOG00000016134	mutS homolog 6 Source RGD Symbol Acc 2322311
C06	UPFR1110488	ENSRNOT00000021537.4	Mgmt	ENSRNOG00000016038	O-6-methylguanine-DNA methyltransferase Source RGD Symbol Acc 3087
C07	UPFR1102175	ENSRNOT00000064581.1	Mlh1	ENSRNOG00000033809	mutL homolog 1 Source RGD Symbol Acc 620937
C08	UPFR1105736	ENSRNOT00000033493.3	Mlh3	ENSRNOG00000006699	mutL homolog 3 Source RGD Symbol Acc 1309227
C09	UPFR1046401	ENSRNOT00000027940.4	Mpg	ENSRNOG00000020571	N-methylpurine-DNA glycosylase Source RGD Symbol Acc 3106
C10	UPFR1015459	ENSRNOT00000012940.4	Mre11a	ENSRNOG00000009506	MRE11 homolog A, double strand break repair nuclease Source RGD Symbol Acc 69263
		ENSRNOT00000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1084978	021538.7	Msh2	000015796	mutS homolog 2 Source RGD Symbol Acc 620786
C12	UPFR1101725	ENSRNOT00000 018449.7	Msh3	ENSRNOG00 000013673	mutS homolog 3 Source RGD Symbol Acc 1563954
D01	UPFR1076026	ENSRNOT00000 091022.1	Msh5	ENSRNOG00 000000857	mutS homolog 5 Source RGD Symbol Acc 1303008
D02	UPFR1015740	ENSRNOT00000 028015.6	Mus81	ENSRNOG00 000020617	MUS81 structure-specific endonuclease subunit Source RGD Symbol Acc 1311957
D03	UPFR1069528	ENSRNOT00000 024375.6	Mutyh	ENSRNOG00 000017887	mutY DNA glycosylase Source RGD Symbol Acc 620045
D04	UPFR1091947	ENSRNOT00000 058645.1	Neil1	ENSRNOG00 000018577	nei-like DNA glycosylase 1 Source RGD Symbol Acc 1306077
D05	UPFR1065242	ENSRNOT00000 014198.4	Neil2	ENSRNOG00 000010696	nei-like DNA glycosylase 2 Source RGD Symbol Acc 1312033
D06	UPFR1060240	ENSRNOT00000 024444.5	Nhej1	ENSRNOG00 000018162	nonhomologous end-joining factor 1 Source RGD Symbol Acc 1359338
D07	UPFR1115242	ENSRNOT00000 016490.6	Nthl1	ENSRNOG00 000012213	nth-like DNA glycosylase 1 Source RGD Symbol Acc 1309289
D08	UPFR1109071	ENSRNOT00000 085766.1	Ogg1	ENSRNOG00 000052140	8-oxoguanine DNA glycosylase Source RGD Symbol Acc 621168
D09	UPFR1022638	ENSRNOT00000 004232.5	Parp1	ENSRNOG00 000003084	poly (ADP-ribose) polymerase 1 Source RGD Symbol Acc 2053
D10	UPFR1118434	ENSRNOT00000 011840.6	Parp2	ENSRNOG00 000008892	poly (ADP-ribose) polymerase 2 Source RGD Symbol Acc 1310568
D11	UPFR1028924	ENSRNOT00000 017224.6	Parp3	ENSRNOG00 000012865	poly (ADP-ribose) polymerase family, member 3 Source RGD Symbol Acc 1305189
D12	UPFR1021702	ENSRNOT00000 043714.4	Pms1	ENSRNOG00 000004076	PMS1 homolog 1, mismatch repair system component Source RGD Symbol Acc 1359511
E01	UPFR1042893	ENSRNOT00000 078603.2	Pms2	ENSRNOG00 000001040	PMS1 homolog 2, mismatch repair system component Source RGD Symbol Acc 1305483
E02	UPFR1061243	ENSRNOT00000 051640.2	Pnkp	ENSRNOG00 000020318	polynucleotide kinase 3 -phosphatase Source RGD Symbol Acc 1303331
E03	UPFR1041463	ENSRNOT00000 026039.5	Polb	ENSRNOG00 000019150	DNA polymerase beta Source RGD Symbol Acc 3363
E04	UPFR1047824	ENSRNOT00000 024875.6	Pold3	ENSRNOG00 000018411	DNA polymerase delta 3, accessory subunit Source RGD Symbol Acc 1312027
E05	UPFR1056289	ENSRNOT00000 023137.5	Poll	ENSRNOG00 000016748	DNA polymerase lambda Source RGD Symbol Acc 1308053
E06	UPFR1035960	ENSRNOT00000 035247.7	Prkdc	ENSRNOG00 000025028	protein kinase, DNA-activated, catalytic subunit Source RGD Symbol Acc 1308982
E07	UPFR1099912	ENSRNOT00000 066468.2	Rad18	ENSRNOG00 000005907	RAD18 E3 ubiquitin protein ligase Source RGD Symbol Acc 1306993
E08	UPFR1038991	ENSRNOT00000 006209.5	Rad21	ENSRNOG00 000004420	RAD21 cohesin complex component Source RGD Symbol Acc 1594529
E09	UPFR1023159	ENSRNOT00000 004042.5	Rad23a	ENSRNOG00 000003026	RAD23 homolog A, nucleotide excision repair protein Source RGD Symbol Acc 1309899
E10	UPFR1023990	ENSRNOT00000 021629.6	Rad23b	ENSRNOG00 000016137	RAD23 homolog B, nucleotide excision repair protein Source RGD Symbol Acc 1562958
E11	UPFR1036827	ENSRNOT00000 063772.2	Rad50	ENSRNOG00 000033065	RAD50 double strand break repair protein Source RGD Symbol Acc 621542
E12	UPFR1036915	ENSRNOT00000 056432.2	Rad51	ENSRNOG00 000037302	RAD51 recombinase Source RGD Symbol Acc 1563603
F01	UPFR1107431	ENSRNOT00000 008846.5	Rad51c	ENSRNOG00 000006661	RAD51 paralog C Source RGD Symbol Acc 1563765
F02	UPFR1039043	ENSRNOT00000 038376.5	Rad51d	ENSRNOG00 000021780	RAD51 paralog D Source RGD Symbol Acc 1306944
F03	UPFR1021957	ENSRNOT00000 076062.2	Rad52	ENSRNOG00 000009742	RAD52 homolog, DNA repair protein Source RGD Symbol Acc 1304975
F04	UPFR1027050	ENSRNOT00000 018004.5	Rad54l	ENSRNOG00 000013148	RAD54 like Source RGD Symbol Acc 1310600
F05	UPFR1117331	ENSRNOT00000 048454.3	Rad9b	ENSRNOG00 000021480	RAD9 checkpoint clamp component B Source RGD Symbol Acc 1308223
F06	UPFR1043507	ENSRNOT00000 003907.7	Rfc1	ENSRNOG00 000002855	replication factor C subunit 1 Source RGD Symbol Acc 620619
F07	UPFR1121749	ENSRNOT00000 090262.1	Rpa1	ENSRNOG00 000003123	replication protein A1 Source RGD Symbol Acc 1307376
F08	UPFR1035288	ENSRNOT00000 011123.5	Rpa3	ENSRNOG00 000008309	replication protein A3 Source RGD Symbol Acc 1306810
F09	UPFR1084196	ENSRNOT00000 015495.5	Slk	ENSRNOG00 000011339	STE20-like kinase Source RGD Symbol Acc 3780
F10	UPFR1096614	ENSRNOT00000 055290.1	Smug1	ENSRNOG00 000036842	single-strand-selective monofunctional uracil-DNA glycosylase 1 Source RGD Symbol Acc 631403

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1014400	ENSRNOT00000076468.2	Tdg	ENSRNOG00000027124	thymine-DNA glycosylase Source RGD Symbol Acc 620959
F12	UPFR1073385	ENSRNOT00000068351.3	Top3a	ENSRNOG00000005099	DNA topoisomerase III alpha Source RGD Symbol Acc 1309320
G01	UPFR1052075	ENSRNOT00000002524.5	Top3b	ENSRNOG00000001845	DNA topoisomerase III beta Source RGD Symbol Acc 1309468
G02	UPFR1038880	ENSRNOT00000033719.5	Trex1	ENSRNOG00000022540	three prime repair exonuclease 1 Source RGD Symbol Acc 1311998
G03	UPFR1094846	ENSRNOT00000081973.1	Trex2	ENSRNOG00000056983	three prime repair exonuclease 2 Source RGD Symbol Acc 1562245
G04	UPFR1120516	ENSRNOT00000056865.3	Ung	ENSRNOG00000000692	uracil-DNA glycosylase Source RGD Symbol Acc 1307200
G05	UPFR1065600	ENSRNOT00000001309.4	Xab2	ENSRNOG00000000988	XPA binding protein 2 Source RGD Symbol Acc 621217
G06	UPFR1016280	ENSRNOT00000011490.3	Xpc	ENSRNOG00000008274	XPC complex subunit, DNA damage recognition and repair factor Source RGD Symbol Acc 1305760
G07	UPFR1052544	ENSRNOT00000027057.5	Xrcc1	ENSRNOG00000019915	X-ray repair cross complementing 1 Source RGD Symbol Acc 619823
G08	UPFR1046683	ENSRNOT00000010025.7	Xrcc2	ENSRNOG00000007493	X-ray repair cross complementing 2 Source RGD Symbol Acc 1564823
G09	UPFR1037605	ENSRNOT00000045850.2	Xrcc4	ENSRNOG00000029966	X-ray repair cross complementing 4 Source RGD Symbol Acc 1359573
G10	UPFR1030423	ENSRNOT00000021656.4	Xrcc5	ENSRNOG00000016105	X-ray repair cross complementing 5 Source RGD Symbol Acc 3976
G11	UPFR1051599	ENSRNOT00000066849.1	Xrcc6	ENSRNOG00000006392	X-ray repair cross complementing 6 Source RGD Symbol Acc 2643
G12	UPFR1096675	ENSRNOT00000074743.1	Atp23	ENSRNOG00000045629	ATP23 metallopeptidase and ATP synthase assembly factor homolog Source RGD Symbol Acc 1588587
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.

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.