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

Mouse DNA Damage Signaling Pathway

Cat. no. 249955 UPMM-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	Atrx	Bax	Blm	Brca1	Brca2	Brip1	Cdc25a	Cdc25c
B	Cdkn1a	Chek1	Chek2	Dclre1a	Ddb2	Ddit3	Ercc1	Ercc2	Exo1	Fanca	Fancc	Fancd2
C	Fancg	Fen1	Gadd45a	Gadd45g	H2afx	Hus1	Lig1	Mbd4	Mcph1	Mdc1	Mgmt	Mif
D	Mlh1	Mlh3	Mpg	Mre11a	Msh2	Msh3	Nbn	Nthl1	Ogg1	Parp1	Parp2	Pcna
E	Pms2	Pole	Polh	Poli	Ppm1d	Ppp1r15a	Prkdc	Pttg1	Rad1	Rad17	Rad18	Rad21
F	Rad50	Rad51	Rad51c	Rad51b	Rad52	Rad9a	Rev1	Rnf8	Rpa1	Smc1a	Smc3	Sumo1
G	Terf1	Topbp1	Trp53	Trp53bp1	Ung	Wrn	Xpa	Xpc	Xrcc1	Xrcc2	Xrcc3	Xrcc6
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM0893522	ENSMUST00000028190.12	Abl1	ENSMUSG00000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A02	UPFM0639545	ENSMUST00000136753.7	Apex1	ENSMUSG00000035960	apurinic/apyrimidinic endonuclease 1 Source MGI Symbol Acc MGI 88042
A03	UPFM0708773	ENSMUST00000150244.1	Atm	ENSMUSG00000034218	ataxia telangiectasia mutated Source MGI Symbol Acc MGI 107202
A04	UPFM0920400	ENSMUST00000185473.6	Atr	ENSMUSG00000032409	ataxia telangiectasia and Rad3 related Source MGI Symbol Acc MGI 108028
A05	UPFM0680833	ENSMUST00000134381.7	Atrx	ENSMUSG00000031229	ATRX, chromatin remodeler Source MGI Symbol Acc MGI 103067
A06	UPFM0903861	ENSMUST00000211195.1	Bax	ENSMUSG00000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
A07	UPFM0790134	ENSMUST00000081314.10	Blm	ENSMUSG00000030528	Bloom syndrome, RecQ like helicase Source MGI Symbol Acc MGI 1328362
A08	UPFM0989907	ENSMUST00000156843.1	Brca1	ENSMUSG00000017146	breast cancer 1, early onset Source MGI Symbol Acc MGI 104537
A09	UPFM0774522	ENSMUST00000201226.1	Brca2	ENSMUSG00000041147	breast cancer 2, early onset Source MGI Symbol Acc MGI 109337
A10	UPFM1005314	ENSMUST00000149748.7	Brip1	ENSMUSG00000034329	BRCA1 interacting protein C-terminal helicase 1 Source MGI Symbol Acc MGI 2442836
A11	UPFM0654747	ENSMUST00000094324.7	Cdc25a	ENSMUSG00000032477	cell division cycle 25A Source MGI Symbol Acc MGI 103198
A12	UPFM0964675	ENSMUST00000237620.1	Cdc25c	ENSMUSG00000044201	cell division cycle 25C Source MGI Symbol Acc MGI 88350
B01	UPFM0867791	ENSMUST00000122348.2	Cdkn1a	ENSMUSG00000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B02	UPFM0983684	ENSMUST00000174105.7	Chek1	ENSMUSG00000032113	checkpoint kinase 1 Source MGI Symbol Acc MGI 1202065
B03	UPFM0966904	ENSMUST00000066160.2	Chek2	ENSMUSG00000029521	checkpoint kinase 2 Source MGI Symbol Acc MGI 1355321
B04	UPFM0702396	ENSMUST00000182058.7	Dclre1a	ENSMUSG00000025077	DNA cross-link repair 1A Source MGI Symbol Acc MGI 1930042
B05	UPFM0801365	ENSMUST00000152277.7	Ddb2	ENSMUSG00000002109	damage specific DNA binding protein 2 Source MGI Symbol Acc MGI 1355314
B06	UPFM0766569	ENSMUST00000026475.14	Ddit3	ENSMUSG00000025408	DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247
B07	UPFM0838350	ENSMUST00000160909.1	Ercc1	ENSMUSG00000003549	excision repair cross-complementing rodent repair deficiency, complementation group 1 Source MGI Symbol Acc MGI 95412
B08	UPFM0928941	ENSMUST00000128167.1	Ercc2	ENSMUSG00000030400	excision repair cross-complementing rodent repair deficiency, complementation group 2 Source MGI Symbol Acc MGI 95413
B09	UPFM0820144	ENSMUST00000193822.5	Exo1	ENSMUSG00000039748	exonuclease 1 Source MGI Symbol Acc MGI 1349427
B10	UPFM0690200	ENSMUST00000035495.14	Fanca	ENSMUSG00000032815	Fanconi anemia, complementation group A Source MGI Symbol Acc MGI 1341823
B11	UPFM0939739	ENSMUST00000163091.7	Fancc	ENSMUSG00000021461	Fanconi anemia, complementation group C Source MGI Symbol Acc MGI 95480
B12	UPFM0818374	ENSMUST00000143535.7	Fancd2	ENSMUSG00000034023	Fanconi anemia, complementation group D2 Source MGI Symbol Acc MGI 2448480
C01	UPFM0633561	ENSMUST00000134083.1	Fancg	ENSMUSG00000028453	Fanconi anemia, complementation group G Source MGI Symbol Acc MGI 1926471
C02	UPFM0669922	ENSMUST00000116542.8	Fen1	ENSMUSG00000024742	flap structure specific endonuclease 1 Source MGI Symbol Acc MGI 102779
C03	UPFM0910954	ENSMUST00000204282.1	Gadd45a	ENSMUSG00000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
C04	UPFM0662562	ENSMUST00000021903.2	Gadd45g	ENSMUSG00000021453	growth arrest and DNA-damage-inducible 45 gamma Source MGI Symbol Acc MGI 1346325
C05	UPFM0679204	ENSMUST00000052686.3	H2afx	ENSMUSG00000049932	H2A histone family, member X Source MGI Symbol Acc MGI 102688
C06	UPFM0688040	ENSMUST00000127578.1	Hus1	ENSMUSG00000020413	HUS1 checkpoint clamp component Source MGI Symbol Acc MGI 1277962
C07	UPFM0804082	ENSMUST00000148471.8	Lig1	ENSMUSG00000056394	ligase I, DNA, ATP-dependent Source MGI Symbol Acc MGI 101789
C08	UPFM0635008	ENSMUST00000203643.1	Mbd4	ENSMUSG00000030322	methyl-CpG binding domain protein 4 Source MGI Symbol Acc MGI 1333850
C09	UPFM0853663	ENSMUST00000133417.1	Mcph1	ENSMUSG00000039842	microcephaly, primary autosomal recessive 1 Source MGI Symbol Acc MGI 2443308
C10	UPFM0731200	ENSMUST00000174124.1	Mdc1	ENSMUSG00000061607	mediator of DNA damage checkpoint 1 Source MGI Symbol Acc MGI 3525201
	UPFM071101	ENSMUST00000		ENSMUSG00	O-6-methylguanine-DNA methyltransferase Source MGI Symbol Acc MGI

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	081510.3	Mgmt	000054612	96977
C12	UPFM1172941	ENSMUST00000038169.7	Mif	ENSMUSG00000033307	macrophage migration inhibitory factor (glycosylation-inhibiting factor) Source MGI Symbol Acc MGI 96982
D01	UPFM0845044	ENSMUST00000135695.1	Mlh1	ENSMUSG00000032498	mutL homolog 1 Source MGI Symbol Acc MGI 101938
D02	UPFM0621696	ENSMUST00000223230.1	Mlh3	ENSMUSG00000021245	mutL homolog 3 Source MGI Symbol Acc MGI 1353455
D03	UPFM0707797	ENSMUST00000142964.7	Mpg	ENSMUSG00000020287	N-methylpurine-DNA glycosylase Source MGI Symbol Acc MGI 97073
D04	UPFM1126318	ENSMUST00000215820.1	Mre11a	ENSMUSG00000031928	MRE11A homolog A, double strand break repair nuclease Source MGI Symbol Acc MGI 1100512
D05	UPFM0982877	ENSMUST00000173097.7	Msh2	ENSMUSG00000024151	mutS homolog 2 Source MGI Symbol Acc MGI 101816
D06	UPFM0907842	ENSMUST00000191509.6	Msh3	ENSMUSG00000014850	mutS homolog 3 Source MGI Symbol Acc MGI 109519
D07	UPFM0981284	ENSMUST00000149069.1	Nbn	ENSMUSG00000028224	nibrin Source MGI Symbol Acc MGI 1351625
D08	UPFM0762690	ENSMUST00000234308.1	Nthl1	ENSMUSG00000041429	nth (endonuclease III)-like 1 (E.coli) Source MGI Symbol Acc MGI 1313275
D09	UPFM0734194	ENSMUST00000129871.1	Ogg1	ENSMUSG00000030271	8-oxoguanine DNA-glycosylase 1 Source MGI Symbol Acc MGI 1097693
D10	UPFM0936420	ENSMUST00000193238.1	Parp1	ENSMUSG00000026496	poly (ADP-ribose) polymerase family, member 1 Source MGI Symbol Acc MGI 1340806
D11	UPFM0873584	ENSMUST00000036126.6	Parp2	ENSMUSG00000036023	poly (ADP-ribose) polymerase family, member 2 Source MGI Symbol Acc MGI 1341112
D12	UPFM0691019	ENSMUST00000140338.1	Pcna	ENSMUSG00000027342	proliferating cell nuclear antigen Source MGI Symbol Acc MGI 97503
E01	UPFM0898345	ENSMUST00000110710.9	Pms2	ENSMUSG00000079109	PMS1 homolog2, mismatch repair system component Source MGI Symbol Acc MGI 104288
E02	UPFM0813694	ENSMUST00000152495.7	Pole	ENSMUSG00000007080	polymerase (DNA directed), epsilon Source MGI Symbol Acc MGI 1196391
E03	UPFM1010044	ENSMUST00000024749.8	Polh	ENSMUSG00000023953	polymerase (DNA directed), eta (RAD 30 related) Source MGI Symbol Acc MGI 1891457
E04	UPFM0925041	ENSMUST00000043286.14	Poli	ENSMUSG00000038425	polymerase (DNA directed), iota Source MGI Symbol Acc MGI 1347081
E05	UPFM0937448	ENSMUST00000020835.15	Ppm1d	ENSMUSG00000020525	protein phosphatase 1D magnesium-dependent, delta isoform Source MGI Symbol Acc MGI 1858214
E06	UPFM0780211	ENSMUST00000042105.10	Ppp1r15a	ENSMUSG00000040435	protein phosphatase 1, regulatory subunit 15A Source MGI Symbol Acc MGI 1927072
E07	UPFM0725960	ENSMUST00000182134.1	Prkdc	ENSMUSG00000022672	protein kinase, DNA activated, catalytic polypeptide Source MGI Symbol Acc MGI 104779
E08	UPFM0929017	ENSMUST00000020687.14	Pttg1	ENSMUSG00000020415	pituitary tumor-transforming gene 1 Source MGI Symbol Acc MGI 1353578
E09	UPFM0991544	ENSMUST00000168408.1	Rad1	ENSMUSG00000022248	RAD1 checkpoint DNA exonuclease Source MGI Symbol Acc MGI 1316678
E10	UPFM0848275	ENSMUST00000226050.1	Rad17	ENSMUSG00000021635	RAD17 checkpoint clamp loader component Source MGI Symbol Acc MGI 1333807
E11	UPFM0915738	ENSMUST00000068487.11	Rad18	ENSMUSG00000030254	RAD18 E3 ubiquitin protein ligase Source MGI Symbol Acc MGI 1890476
E12	UPFM0893108	ENSMUST00000022927.10	Rad21	ENSMUSG00000022314	RAD21 cohesin complex component Source MGI Symbol Acc MGI 108016
F01	UPFM0836329	ENSMUST00000128483.7	Rad50	ENSMUSG00000020380	RAD50 double strand break repair protein Source MGI Symbol Acc MGI 109292
F02	UPFM0932448	ENSMUST00000110828.1	Rad51	ENSMUSG00000027323	RAD51 recombinase Source MGI Symbol Acc MGI 97890
F03	UPFM0830591	ENSMUST00000129400.1	Rad51c	ENSMUSG00000007646	RAD51 paralog C Source MGI Symbol Acc MGI 2150020
F04	UPFM1002524	ENSMUST00000171210.2	Rad51b	ENSMUSG00000059060	RAD51 paralog B Source MGI Symbol Acc MGI 1099436
F05	UPFM0873908	ENSMUST00000032269.11	Rad52	ENSMUSG00000030166	RAD52 homolog, DNA repair protein Source MGI Symbol Acc MGI 101949
F06	UPFM0986276	ENSMUST00000237467.1	Rad9a	ENSMUSG00000024824	RAD9 checkpoint clamp component A Source MGI Symbol Acc MGI 1328356
F07	UPFM0983231	ENSMUST00000194650.5	Rev1	ENSMUSG00000026082	REV1, DNA directed polymerase Source MGI Symbol Acc MGI 1929074
F08	UPFM0694985	ENSMUST00000172800.1	Rnf8	ENSMUSG00000090083	ring finger protein 8 Source MGI Symbol Acc MGI 1929069
F09	UPFM0904551	ENSMUST00000135770.7	Rpa1	ENSMUSG00000000751	replication protein A1 Source MGI Symbol Acc MGI 1915525
F10	UPFM0740855	ENSMUST00000045312.5	Smc1a	ENSMUSG00000041133	structural maintenance of chromosomes 1A Source MGI Symbol Acc MGI 1344345

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM0750106	ENSMUST00000025930.9	Smc3	ENSMUSG00000024974	structural maintenance of chromosomes 3 Source MGI Symbol Acc MGI 1339795
F12	UPFM0950123	ENSMUST00000091374.8	Sumo1	ENSMUSG00000026021	small ubiquitin-like modifier 1 Source MGI Symbol Acc MGI 1197010
G01	UPFM0629489	ENSMUST00000188371.6	Terf1	ENSMUSG00000025925	telomeric repeat binding factor 1 Source MGI Symbol Acc MGI 109634
G02	UPFM0948049	ENSMUST00000035164.9	Topbp1	ENSMUSG00000032555	topoisomerase (DNA) II binding protein 1 Source MGI Symbol Acc MGI 1920018
G03	UPFM0669133	ENSMUST00000171247.7	Trp53	ENSMUSG00000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G04	UPFM0921067	ENSMUST00000147540.7	Trp53bp1	ENSMUSG00000043909	transformation related protein 53 binding protein 1 Source MGI Symbol Acc MGI 1351320
G05	UPFM0979636	ENSMUST00000112275.7	Ung	ENSMUSG00000029591	uracil DNA glycosylase Source MGI Symbol Acc MGI 109352
G06	UPFM0654315	ENSMUST00000211498.1	Wrn	ENSMUSG00000031583	Werner syndrome RecQ like helicase Source MGI Symbol Acc MGI 109635
G07	UPFM0877903	ENSMUST00000142380.1	Xpa	ENSMUSG00000028329	xeroderma pigmentosum, complementation group A Source MGI Symbol Acc MGI 99135
G08	UPFM0637469	ENSMUST00000150279.2	Xpc	ENSMUSG00000030094	xeroderma pigmentosum, complementation group C Source MGI Symbol Acc MGI 103557
G09	UPFM0987823	ENSMUST00000205573.1	Xrcc1	ENSMUSG00000051768	X-ray repair complementing defective repair in Chinese hamster cells 1 Source MGI Symbol Acc MGI 99137
G10	UPFM0791676	ENSMUST00000134972.2	Xrcc2	ENSMUSG00000028933	X-ray repair complementing defective repair in Chinese hamster cells 2 Source MGI Symbol Acc MGI 1927345
G11	UPFM0922377	ENSMUST00000124064.7	Xrcc3	ENSMUSG00000021287	X-ray repair complementing defective repair in Chinese hamster cells 3 Source MGI Symbol Acc MGI 1921585
G12	UPFM0634671	ENSMUST00000069530.12	Xrcc6	ENSMUSG00000022471	X-ray repair complementing defective repair in Chinese hamster cells 6 Source MGI Symbol Acc MGI 95606
H01	UPFM1132946	ENSMUST00000163829.1	Actb	ENSMUSG00000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM1132947	ENSMUST00000102476.4	B2m	ENSMUSG00000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM1132948	ENSMUST00000117757.8	Gapdh	ENSMUSG00000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM1132949	ENSMUST00000026613.13	Gusb	ENSMUSG00000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM1132950	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG00000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM1126609	UPL_MGDC	MGDC	UPL_MGDC	Mouse 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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