

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

Mouse DNA Damage Signaling Pathway

Cat. no. 249950 SBMM-029ZA

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

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

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System 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	Bim	Bra1	Bra2	Brip1	Cdc25a	Cdc25c
B	Cdkn1a	Chek1	Chek2	Dclre1a	Ddb2	Ddit3	Erec1	Erec2	Exo1	Fanca	Fancc	Fancd2
C	Fancg	Fen1	Gadd45a	Gadd45g	H2afx	Hus1	Lig1	Mbd4	Mcp1	Mdc1	Mgmt	Mif
D	Mlh1	Mlh3	Mpg	Mre11a	Msh2	Msh3	Nbn	Nhlh1	Ogg1	Parp1	Parp2	Pcna
E	Pms2	Pole	Polh	Poli	Ppm1d	Ppp1r15a	Prkdc	Ptfg1	Rad1	Rad17	Rad18	Rad21
F	Rad50	Rad51	Rad51c	Rad51b	Rad52	Rad9a	Rev1	Rnf8	Rpa1	Smc1a	Smc3	Sumo1
G	Terf1	Topbp1	Trp53	Trp53bp1	Ung	Wrm	Xpa	Xpc	Xrcc1	Xrcc2	Xrcc3	Xrcc6
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBM1025688	ENSMUST00000127714.1	Abl1	ENSMUSG0000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A02	SBM0874745	ENSMUST00000128395.1	Apex1	ENSMUSG0000035960	apurinic/apyrimidinic endonuclease 1 Source MGI Symbol Acc MGI 88042
A03	SBM0745660	ENSMUST00000150244.1	Atm	ENSMUSG0000034218	ataxia telangiectasia mutated Source MGI Symbol Acc MGI 107202
A04	SBM0707457	ENSMUST00000189602.6	Atr	ENSMUSG0000032409	ataxia telangiectasia and Rad3 related Source MGI Symbol Acc MGI 108028
A05	SBM0955852	ENSMUST00000154866.7	Atrx	ENSMUSG0000031229	ATRX, chromatin remodeler Source MGI Symbol Acc MGI 103067
A06	SBM0740166	ENSMUST00000211615.1	Bax	ENSMUSG0000033873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
A07	SBM0777218	ENSMUST00000205584.1	Blm	ENSMUSG0000030528	Bloom syndrome, RecQ like helicase Source MGI Symbol Acc MGI 1328362
A08	SBM0935779	ENSMUST00000142086.2	Brc1	ENSMUSG0000017146	breast cancer 1, early onset Source MGI Symbol Acc MGI 104537
A09	SBM0807222	ENSMUST00000201226.1	Brc2	ENSMUSG0000041147	breast cancer 2, early onset Source MGI Symbol Acc MGI 109337
A10	SBM0715407	ENSMUST00000123366.1	Brip1	ENSMUSG0000034329	BRCA1 interacting protein C-terminal helicase 1 Source MGI Symbol Acc MGI 2442836
A11	SBM0768186	ENSMUST00000199787.2	Cdc25a	ENSMUSG0000032477	cell division cycle 25A Source MGI Symbol Acc MGI 103198
A12	SBM0971821	ENSMUST00000060710.8	Cdc25c	ENSMUSG0000044201	cell division cycle 25C Source MGI Symbol Acc MGI 88350
B01	SBM1034022	ENSMUST00000023829.7	Cdkn1a	ENSMUSG0000023067	cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556
B02	SBM0725925	ENSMUST00000173963.8	Chek1	ENSMUSG0000032113	checkpoint kinase 1 Source MGI Symbol Acc MGI 1202065
B03	SBM0884188	ENSMUST00000066160.2	Chek2	ENSMUSG0000029521	checkpoint kinase 2 Source MGI Symbol Acc MGI 1355321
B04	SBM0793525	ENSMUST00000182276.1	Dclre1a	ENSMUSG0000025077	DNA cross-link repair 1A Source MGI Symbol Acc MGI 1930042
B05	SBM0998185	ENSMUST00000152277.7	Ddb2	ENSMUSG0000002109	damage specific DNA binding protein 2 Source MGI Symbol Acc MGI 1355314
B06	SBM0724182	ENSMUST00000139091.1	Ddit3	ENSMUSG0000025408	DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247
B07	SBM0942819	ENSMUST00000003645.8	Ercc1	ENSMUSG0000003549	excision repair cross-complementing rodent repair deficiency, complementation group 1 Source MGI Symbol Acc MGI 95412
B08	SBM0850014	ENSMUST00000062831.15	Ercc2	ENSMUSG0000030400	excision repair cross-complementing rodent repair deficiency, complementation group 2 Source MGI Symbol Acc MGI 95413
B09	SBM0925254	ENSMUST00000193822.5	Exo1	ENSMUSG0000039748	exonuclease 1 Source MGI Symbol Acc MGI 1349427
B10	SBM1076415	ENSMUST00000150318.1	Fanca	ENSMUSG0000032815	Fanconi anemia, complementation group A Source MGI Symbol Acc MGI 1341823
B11	SBM1093074	ENSMUST00000160735.7	Fancc	ENSMUSG0000021461	Fanconi anemia, complementation group C Source MGI Symbol Acc MGI 95480
B12	SBM0802883	ENSMUST00000142453.1	Fancd2	ENSMUSG0000034023	Fanconi anemia, complementation group D2 Source MGI Symbol Acc MGI 2448480
C01	SBM0867557	ENSMUST00000030165.4	Fancg	ENSMUSG0000028453	Fanconi anemia, complementation group G Source MGI Symbol Acc MGI 1926471
C02	SBM0765565	ENSMUST00000025651.5	Fen1	ENSMUSG0000024742	flap structure specific endonuclease 1 Source MGI Symbol Acc MGI 102779
C03	SBM0962210	ENSMUST00000151958.1	Gadd45a	ENSMUSG0000036390	growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799
C04	SBM0972980	ENSMUST00000021903.2	Gadd45g	ENSMUSG0000021453	growth arrest and DNA-damage-inducible 45 gamma Source MGI Symbol Acc MGI 1346325
C05	SBM0717509	ENSMUST00000052686.3	H2afx	ENSMUSG0000049932	H2A histone family, member X Source MGI Symbol Acc MGI 102688
C06	SBM0890659	ENSMUST00000127578.1	Hus1	ENSMUSG0000020413	HUS1 checkpoint clamp component Source MGI Symbol Acc MGI 1277962
C07	SBM0876363	ENSMUST00000123846.8	Lig1	ENSMUSG0000056394	ligase I, DNA, ATP-dependent Source MGI Symbol Acc MGI 101789
C08	SBM0719458	ENSMUST00000203643.1	Mbd4	ENSMUSG0000030322	methyl-CpG binding domain protein 4 Source MGI Symbol Acc MGI 1333850
C09	SBM0956184	ENSMUST00000039412.14	Mcph1	ENSMUSG0000039842	microcephaly, primary autosomal recessive 1 Source MGI Symbol Acc MGI 2443308
C10	SBM1039560	ENSMUST00000174124.1	Mdc1	ENSMUSG0000061607	mediator of DNA damage checkpoint 1 Source MGI Symbol Acc MGI 3525201
		ENSMUST00000		ENSMUSG00	O-6-methylguanine-DNA methyltransferase Source MGI Symbol Acc MGI

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0832259	081510.3	Mgmt	000054612	96977
C12	SBM0802241	ENSMUST00000218267.1	Mif	ENSMUSG0000033307	macrophage migration inhibitory factor (glycosylation-inhibiting factor) Source MGI Symbol Acc MGI 96982
D01	SBM0706264	ENSMUST00000134316.1	Mlh1	ENSMUSG0000032498	mutL homolog 1 Source MGI Symbol Acc MGI 101938
D02	SBM0907919	ENSMUST00000166821.7	Mlh3	ENSMUSG0000021245	mutL homolog 3 Source MGI Symbol Acc MGI 1353455
D03	SBM0928248	ENSMUST00000142964.7	Mpg	ENSMUSG0000020287	N-methylpurine-DNA glycosylase Source MGI Symbol Acc MGI 97073
D04	SBM0787147	ENSMUST00000215820.1	Mre11a	ENSMUSG0000031928	MRE11A homolog A, double strand break repair nuclease Source MGI Symbol Acc MGI 1100512
D05	SBM0831857	ENSMUST00000172855.1	Msh2	ENSMUSG0000024151	mutS homolog 2 Source MGI Symbol Acc MGI 101816
D06	SBM1039955	ENSMUST00000185852.6	Msh3	ENSMUSG0000014850	mutS homolog 3 Source MGI Symbol Acc MGI 109519
D07	SBM0680530	ENSMUST00000029879.14	Nbn	ENSMUSG0000028224	nibrin Source MGI Symbol Acc MGI 1351625
D08	SBM1068198	ENSMUST00000234635.1	Nth1	ENSMUSG0000041429	nth (endonuclease III)-like 1 (E.coli) Source MGI Symbol Acc MGI 1313275
D09	SBM1066827	ENSMUST00000154350.2	Ogg1	ENSMUSG0000030271	8-oxoguanine DNA-glycosylase 1 Source MGI Symbol Acc MGI 1097693
D10	SBM0750626	ENSMUST00000191639.1	Parp1	ENSMUSG0000026496	poly (ADP-ribose) polymerase family, member 1 Source MGI Symbol Acc MGI 1340806
D11	SBM0881717	ENSMUST00000226880.1	Parp2	ENSMUSG0000036023	poly (ADP-ribose) polymerase family, member 2 Source MGI Symbol Acc MGI 1341112
D12	SBM0823260	ENSMUST00000140338.1	Pcna	ENSMUSG0000027342	proliferating cell nuclear antigen Source MGI Symbol Acc MGI 97503
E01	SBM0984554	ENSMUST00000110710.9	Pms2	ENSMUSG0000079109	PMS1 homolog2, mismatch repair system component Source MGI Symbol Acc MGI 104288
E02	SBM0935143	ENSMUST00000152495.7	Pole	ENSMUSG0000007080	polymerase (DNA directed), epsilon Source MGI Symbol Acc MGI 1196391
E03	SBM1089445	ENSMUST00000233438.1	Polh	ENSMUSG0000023953	polymerase (DNA directed), eta (RAD 30 related) Source MGI Symbol Acc MGI 1891457
E04	SBM0828043	ENSMUST00000159389.7	Poli	ENSMUSG0000038425	polymerase (DNA directed), iota Source MGI Symbol Acc MGI 1347081
E05	SBM0864740	ENSMUST00000020835.15	Ppm1d	ENSMUSG0000020525	protein phosphatase 1D magnesium-dependent, delta isoform Source MGI Symbol Acc MGI 1858214
E06	SBM1018214	ENSMUST00000042105.10	Ppp1r15a	ENSMUSG0000040435	protein phosphatase 1, regulatory subunit 15A Source MGI Symbol Acc MGI 1927072
E07	SBM0998200	ENSMUST00000023352.8	Prkdc	ENSMUSG0000022672	protein kinase, DNA activated, catalytic polypeptide Source MGI Symbol Acc MGI 104779
E08	SBM0709049	ENSMUST00000101340.10	Ptfg1	ENSMUSG0000020415	pituitary tumor-transforming gene 1 Source MGI Symbol Acc MGI 1353578
E09	SBM1078003	ENSMUST00000168408.1	Rad1	ENSMUSG0000022248	RAD1 checkpoint DNA exonuclease Source MGI Symbol Acc MGI 1316678
E10	SBM0733888	ENSMUST00000022136.13	Rad17	ENSMUSG0000021635	RAD17 checkpoint clamp loader component Source MGI Symbol Acc MGI 1333807
E11	SBM0947079	ENSMUST00000077088.10	Rad18	ENSMUSG0000030254	RAD18 E3 ubiquitin protein ligase Source MGI Symbol Acc MGI 1890476
E12	SBM0870390	ENSMUST00000226529.1	Rad21	ENSMUSG0000022314	RAD21 cohesin complex component Source MGI Symbol Acc MGI 108016
F01	SBM0935165	ENSMUST00000126121.1	Rad50	ENSMUSG0000020380	RAD50 double strand break repair protein Source MGI Symbol Acc MGI 109292
F02	SBM0702001	ENSMUST00000110828.1	Rad51	ENSMUSG0000027323	RAD51 recombinase Source MGI Symbol Acc MGI 97890
F03	SBM0696860	ENSMUST00000129400.1	Rad51c	ENSMUSG0000007646	RAD51 paralogue C Source MGI Symbol Acc MGI 2150020
F04	SBM0876551	ENSMUST00000218039.2	Rad51b	ENSMUSG0000059060	RAD51 paralogue B Source MGI Symbol Acc MGI 1099436
F05	SBM0882006	ENSMUST00000032269.11	Rad52	ENSMUSG0000030166	RAD52 homolog, DNA repair protein Source MGI Symbol Acc MGI 101949
F06	SBM0843955	ENSMUST00000237278.1	Rad9a	ENSMUSG0000024824	RAD9 checkpoint clamp component A Source MGI Symbol Acc MGI 1328356
F07	SBM1072707	ENSMUST00000193922.1	Rev1	ENSMUSG0000026082	REV1, DNA directed polymerase Source MGI Symbol Acc MGI 1929074
F08	SBM0731197	ENSMUST00000234362.1	Rnf8	ENSMUSG0000090083	ring finger protein 8 Source MGI Symbol Acc MGI 1929069
F09	SBM1051303	ENSMUST00000135770.7	Rpa1	ENSMUSG0000000751	replication protein A1 Source MGI Symbol Acc MGI 1915525
F10	SBM1046284	ENSMUST00000045312.5	Smc1a	ENSMUSG0000041133	structural maintenance of chromosomes 1A Source MGI Symbol Acc MGI 1344345

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0966407	ENSMUST00000025930.9	Smc3	ENSMUSG0000024974	structural maintenance of chromosomes 3 Source MGI Symbol Acc MGI 1339795
F12	SBM0921812	ENSMUST00000123857.1	Sumo1	ENSMUSG0000026021	small ubiquitin-like modifier 1 Source MGI Symbol Acc MGI 1197010
G01	SBM1006727	ENSMUST00000027057.7	Terf1	ENSMUSG0000025925	telomeric repeat binding factor 1 Source MGI Symbol Acc MGI 109634
G02	SBM0695789	ENSMUST00000185721.1	Topbp1	ENSMUSG0000032555	topoisomerase (DNA II) binding protein 1 Source MGI Symbol Acc MGI 1920018
G03	SBM0841427	ENSMUST00000108657.3	Trp53	ENSMUSG0000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G04	SBM0942656	ENSMUST00000110647.7	Trp53bp1	ENSMUSG0000043909	transformation related protein 53 binding protein 1 Source MGI Symbol Acc MGI 1351320
G05	SBM0820363	ENSMUST00000031587.12	Ung	ENSMUSG0000029591	uracil DNA glycosylase Source MGI Symbol Acc MGI 109352
G06	SBM0707429	ENSMUST00000033990.6	Wrn	ENSMUSG0000031583	Werner syndrome RecQ like helicase Source MGI Symbol Acc MGI 109635
G07	SBM0953059	ENSMUST00000058232.10	Xpa	ENSMUSG0000028329	xeroderma pigmentosum, complementation group A Source MGI Symbol Acc MGI 99135
G08	SBM0993944	ENSMUST00000206476.1	Xpc	ENSMUSG0000030094	xeroderma pigmentosum, complementation group C Source MGI Symbol Acc MGI 103557
G09	SBM0836371	ENSMUST00000205573.1	Xrcc1	ENSMUSG0000051768	X-ray repair complementing defective repair in Chinese hamster cells 1 Source MGI Symbol Acc MGI 99137
G10	SBM1037599	ENSMUST00000134972.2	Xrcc2	ENSMUSG0000028933	X-ray repair complementing defective repair in Chinese hamster cells 2 Source MGI Symbol Acc MGI 1927345
G11	SBM1034452	ENSMUST00000021715.5	Xrcc3	ENSMUSG0000021287	X-ray repair complementing defective repair in Chinese hamster cells 3 Source MGI Symbol Acc MGI 1921585
G12	SBM0783568	ENSMUST00000164779.1	Xrcc6	ENSMUSG0000022471	X-ray repair complementing defective repair in Chinese hamster cells 6 Source MGI Symbol Acc MGI 95606
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	SBM1218554	Sybr_MGDC	MGDC	Sybr_MGDC	Mouse Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
QuantiNova Reverse Transcription Kit (10)*	For 10 x 20 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 μ l QuantiNova SYBR Green RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ l QN ROX Reference Dye, 1.9 ml Water	208052

*Larger kit sizes available.

The QuantiNova LNA 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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