

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

Mouse mTOR Signaling

Cat. no. 249950 SBMM-098ZA

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	Akt1	Akt1s1	Akt2	Akt3	Cab39	Cab39l	Cdc42	Chuk	Ddit4	Ddit4l	Deptor	Eif4b
B	Eif4e	Eif4ebp1	Eif4ebp2	Fkbp1a	Fkbp8	Gsk3b	Hif1a	Hras	Hspa4	Igf1	Igf1bp3	Ikbkb
C	Ikk	Ins2	Insr	Irs1	Mapk1	Mapk3	Mapkap1	Mts8	Mtor	Myo1c	Pdjk1	Pik3c3
D	Pik3ca	Pik3cb	Pik3cd	Pik3cg	Pld1	Pld2	Ppp2ca	Ppp2r2b	Ptpa	Prkaa1	Prkaa2	Prkab1
E	Prkab2	Prkag1	Prkag2	Prkag3	Prkca	Prkcb	Prkcg	Prkce	Pten	Rheb	Rhoa	Rictor
F	Rps6	Rps6ka1	Rps6ka2	Rps6ka5	Rps6kb1	Rps6kb2	Rplor	Rraga	Rragb	Rragc	Rragd	Sgk1
G	Sik11	Stradb	Telo2	Trp53	Tsc1	Tsc2	Ulk1	Ulk2	Vegfa	Vegfb	Vegfc	Ywhaq
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	SBM1020452	ENSMUST00000144550.8	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A02	SBM0871889	ENSMUST00000152091.7	Akt1s1	ENSMUSG0000011096	AKT1 substrate 1 (proline-rich) Source MGI Symbol Acc MGI 1914855
A03	SBM0882867	ENSMUST00000051356.11	Akt2	ENSMUSG0000004056	thymoma viral proto-oncogene 2 Source MGI Symbol Acc MGI 104874
A04	SBM0683049	ENSMUST00000019843.14	Akt3	ENSMUSG0000019699	thymoma viral proto-oncogene 3 Source MGI Symbol Acc MGI 1345147
A05	SBM0874517	ENSMUST00000097666.3	Cab39	ENSMUSG0000036707	calcium binding protein 39 Source MGI Symbol Acc MGI 107438
A06	SBM0835882	ENSMUST00000225595.1	Cab39l	ENSMUSG0000021981	calcium binding protein 39-like Source MGI Symbol Acc MGI 1914081
A07	SBM1071094	ENSMUST00000030417.9	Cdc42	ENSMUSG0000006699	cell division cycle 42 Source MGI Symbol Acc MGI 106211
A08	SBM1034080	ENSMUST00000026217.10	Chuk	ENSMUSG0000025199	conserved helix-loop-helix ubiquitous kinase Source MGI Symbol Acc MGI 99484
A09	SBM1018894	ENSMUST00000020308.4	Ddit4	ENSMUSG0000020108	DNA-damage-inducible transcript 4 Source MGI Symbol Acc MGI 1921997
A10	SBM1078706	ENSMUST000000165845.1	Ddit4l	ENSMUSG0000046818	DNA-damage-inducible transcript 4-like Source MGI Symbol Acc MGI 1920534
A11	SBM0948318	ENSMUST00000096433.9	Deptor	ENSMUSG0000022419	DEP domain containing MTOR-interacting protein Source MGI Symbol Acc MGI 2146322
A12	SBM0850376	ENSMUST000000229400.1	Eif4b	ENSMUSG0000058655	eukaryotic translation initiation factor 4B Source MGI Symbol Acc MGI 95304
B01	SBM0964655	ENSMUST000000198252.1	Eif4e	ENSMUSG0000028156	eukaryotic translation initiation factor 4E Source MGI Symbol Acc MGI 95305
B02	SBM1066112	ENSMUST000000033880.6	Eif4ebp1	ENSMUSG00000031490	eukaryotic translation initiation factor 4E binding protein 1 Source MGI Symbol Acc MGI 103267
B03	SBM0686292	ENSMUST000000167087.1	Eif4ebp2	ENSMUSG0000020091	eukaryotic translation initiation factor 4E binding protein 2 Source MGI Symbol Acc MGI 109198
B04	SBM0751160	ENSMUST000000142985.7	Fkbp1a	ENSMUSG0000032966	FK506 binding protein 1a Source MGI Symbol Acc MGI 95541
B05	SBM0768948	ENSMUST000000119698.7	Fkbp8	ENSMUSG0000019428	FK506 binding protein 8 Source MGI Symbol Acc MGI 1341070
B06	SBM0862470	ENSMUST000000132057.1	Gsk3b	ENSMUSG0000022812	glycogen synthase kinase 3 beta Source MGI Symbol Acc MGI 1861437
B07	SBM1003614	ENSMUST000000110464.7	Hif1a	ENSMUSG0000021109	hypoxia inducible factor 1, alpha subunit Source MGI Symbol Acc MGI 106918
B08	SBM0815785	ENSMUST000000097957.10	Hras	ENSMUSG0000025499	Harvey rat sarcoma virus oncogene Source MGI Symbol Acc MGI 96224
B09	SBM0909157	ENSMUST000000020630.7	Hspa4	ENSMUSG0000020361	heat shock protein 4 Source MGI Symbol Acc MGI 1342292
B10	SBM1026650	ENSMUST000000122386.7	Igf1	ENSMUSG0000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
B11	SBM0693110	ENSMUST000000020702.10	Igfbp3	ENSMUSG0000020427	insulin-like growth factor binding protein 3 Source MGI Symbol Acc MGI 96438
B12	SBM0683235	ENSMUST000000144583.7	Ikbbp	ENSMUSG0000031537	inhibitor of kappaB kinase beta Source MGI Symbol Acc MGI 1338071
C01	SBM0904671	ENSMUST000000033182.9	Ilk	ENSMUSG0000030890	integrin linked kinase Source MGI Symbol Acc MGI 1195267
C02	SBM0867142	ENSMUST000000125933.1	Ins2	ENSMUSG0000000215	insulin II Source MGI Symbol Acc MGI 96573
C03	SBM1013137	ENSMUST000000207100.1	Insr	ENSMUSG0000005534	insulin receptor Source MGI Symbol Acc MGI 96575
C04	SBM0923271	ENSMUST000000069799.2	Irs1	ENSMUSG0000055980	insulin receptor substrate 1 Source MGI Symbol Acc MGI 99454
C05	SBM0800614	ENSMUST000000231821.1	Mapk1	ENSMUSG0000063358	mitogen-activated protein kinase 1 Source MGI Symbol Acc MGI 1346858
C06	SBM0856900	ENSMUST000000206272.1	Mapk3	ENSMUSG0000063065	mitogen-activated protein kinase 3 Source MGI Symbol Acc MGI 1346859
C07	SBM0919264	ENSMUST000000147337.7	Mapkap1	ENSMUSG0000038696	mitogen-activated protein kinase associated protein 1 Source MGI Symbol Acc MGI 2444554
C08	SBM1042671	ENSMUST000000179163.2	Mlst8	ENSMUSG0000024142	MTOR associated protein, LST8 homolog (<i>S. cerevisiae</i>) Source MGI Symbol Acc MGI 1929514
C09	SBM1220565	ENSMUST000000103221.9	Mtor	ENSMUSG0000028991	mechanistic target of rapamycin kinase Source MGI Symbol Acc MGI 1928394
C10	SBM0824732	ENSMUST000000148659.7	Myo1c	ENSMUSG0000017774	myosin IC Source MGI Symbol Acc MGI 106612
		ENSMUST000000		ENSMUSG00	3-phosphoinositide dependent protein kinase 1 Source MGI Symbol Acc MGI

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0716432	115409.8	Pdpk1	000024122	1338068
C12	SBM0993091	ENSMUST00000115811.7	Pik3c3	ENSMUSG0000033628	phosphatidylinositol 3-kinase catalytic subunit type 3 Source MGI Symbol Acc MGI 2445019
D01	SBM0905151	ENSMUST00000108243.7	Pik3ca	ENSMUSG0000027665	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source MGI Symbol Acc MGI 1206581
D02	SBM1012041	ENSMUST00000124723.1	Pik3cb	ENSMUSG0000032462	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta Source MGI Symbol Acc MGI 1922019
D03	SBM1031925	ENSMUST00000105688.9	Pik3cd	ENSMUSG0000039936	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta Source MGI Symbol Acc MGI 1098211
D04	SBM0808732	ENSMUST00000220366.1	Pik3cg	ENSMUSG0000020573	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma Source MGI Symbol Acc MGI 1353576
D05	SBM0696678	ENSMUST00000123539.7	Pld1	ENSMUSG0000027695	phospholipase D1 Source MGI Symbol Acc MGI 109585
D06	SBM0728952	ENSMUST00000146248.1	Pld2	ENSMUSG0000020828	phospholipase D2 Source MGI Symbol Acc MGI 892877
D07	SBM0974754	ENSMUST0000020608.2	Ppp2ca	ENSMUSG0000020349	protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform Source MGI Symbol Acc MGI 1321159
D08	SBM1064475	ENSMUST00000153737.1	Ppp2r2b	ENSMUSG0000024500	protein phosphatase 2, regulatory subunit B, beta Source MGI Symbol Acc MGI 1920180
D09	SBM0993253	ENSMUST00000137741.1	Ptpa	ENSMUSG0000039515	protein phosphatase 2 protein activator Source MGI Symbol Acc MGI 1346006
D10	SBM0905959	ENSMUST00000228218.1	Prkaa1	ENSMUSG0000050697	protein kinase, AMP-activated, alpha 1 catalytic subunit Source MGI Symbol Acc MGI 2145955
D11	SBM0859779	ENSMUST0000030243.7	Prkaa2	ENSMUSG0000028518	protein kinase, AMP-activated, alpha 2 catalytic subunit Source MGI Symbol Acc MGI 1336173
D12	SBM0933984	ENSMUST00000141018.1	Prkab1	ENSMUSG0000029513	protein kinase, AMP-activated, beta 1 non-catalytic subunit Source MGI Symbol Acc MGI 1336167
E01	SBM0898406	ENSMUST00000132719.1	Prkab2	ENSMUSG0000038205	protein kinase, AMP-activated, beta 2 non-catalytic subunit Source MGI Symbol Acc MGI 1336185
E02	SBM0922630	ENSMUST00000229346.1	Prkag1	ENSMUSG0000067713	protein kinase, AMP-activated, gamma 1 non-catalytic subunit Source MGI Symbol Acc MGI 108411
E03	SBM0764294	ENSMUST00000150135.7	Prkag2	ENSMUSG0000028944	protein kinase, AMP-activated, gamma 2 non-catalytic subunit Source MGI Symbol Acc MGI 1336153
E04	SBM1026091	ENSMUST00000160732.7	Prkag3	ENSMUSG0000006542	protein kinase, AMP-activated, gamma 3 non-catalytic subunit Source MGI Symbol Acc MGI 1891343
E05	SBM0890328	ENSMUST00000100302.3	Prkca	ENSMUSG0000050965	protein kinase C, alpha Source MGI Symbol Acc MGI 97595
E06	SBM0696479	ENSMUST00000064921.4	Prkcb	ENSMUSG0000052889	protein kinase C, beta Source MGI Symbol Acc MGI 97596
E07	SBM1062071	ENSMUST00000100301.10	Prkcg	ENSMUSG0000078816	protein kinase C, gamma Source MGI Symbol Acc MGI 97597
E08	SBM0773765	ENSMUST00000150486.1	Prkce	ENSMUSG0000045038	protein kinase C, epsilon Source MGI Symbol Acc MGI 97599
E09	SBM1220566	ENSMUST00000013807.7	Pten	ENSMUSG0000013663	phosphatase and tensin homolog Source MGI Symbol Acc MGI 109583
E10	SBM1072282	ENSMUST00000030787.8	Rheb	ENSMUSG0000028945	Ras homolog enriched in brain Source MGI Symbol Acc MGI 97912
E11	SBM0943773	ENSMUST00000194701.5	Rhoa	ENSMUSG0000007815	ras homolog family member A Source MGI Symbol Acc MGI 1096342
E12	SBM0898334	ENSMUST00000061656.7	Rictor	ENSMUSG0000050310	RPTOR independent companion of MTOR, complex 2 Source MGI Symbol Acc MGI 1926007
F01	SBM0697193	ENSMUST00000123229.7	Rps6	ENSMUSG0000028495	ribosomal protein S6 Source MGI Symbol Acc MGI 98159
F02	SBM0679686	ENSMUST00000105894.10	Rps6ka1	ENSMUSG0000003644	ribosomal protein S6 kinase polypeptide 1 Source MGI Symbol Acc MGI 104558
F03	SBM0942497	ENSMUST00000024575.7	Rps6ka2	ENSMUSG0000023809	ribosomal protein S6 kinase, polypeptide 2 Source MGI Symbol Acc MGI 1342290
F04	SBM0843054	ENSMUST00000221246.1	Rps6ka5	ENSMUSG0000021180	ribosomal protein S6 kinase, polypeptide 5 Source MGI Symbol Acc MGI 1920336
F05	SBM0853475	ENSMUST00000058286.8	Rps6kb1	ENSMUSG0000020516	ribosomal protein S6 kinase, polypeptide 1 Source MGI Symbol Acc MGI 1270849
F06	SBM0762977	ENSMUST00000127605.7	Rps6kb2	ENSMUSG0000024830	ribosomal protein S6 kinase, polypeptide 2 Source MGI Symbol Acc MGI 1927343
F07	SBM0780248	ENSMUST00000139728.7	Rptor	ENSMUSG0000025583	regulatory associated protein of MTOR, complex 1 Source MGI Symbol Acc MGI 1921620
F08	SBM0971924	ENSMUST00000091064.7	Rraga	ENSMUSG0000070934	Ras-related GTP binding A Source MGI Symbol Acc MGI 1915691
F09	SBM0878193	ENSMUST00000039720.10	Rragb	ENSMUSG0000041658	Ras-related GTP binding B Source MGI Symbol Acc MGI 3038613
F10	SBM1063961	ENSMUST00000155454.1	Rragc	ENSMUSG0000028646	Ras-related GTP binding C Source MGI Symbol Acc MGI 1858751

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0686878	ENSMUST00000136792.1	Rragd	ENSMUSG0000028278	Ras-related GTP binding D Source MGI Symbol Acc MGI 1098604
F12	SBM0909072	ENSMUST00000126560.1	Sgk1	ENSMUSG0000019970	serum/glucocorticoid regulated kinase 1 Source MGI Symbol Acc MGI 1340062
G01	SBM0873081	ENSMUST00000213772.1	Slk11	ENSMUSG0000003068	serine/threonine kinase 11 Source MGI Symbol Acc MGI 1341870
G02	SBM1040912	ENSMUST00000147637.7	Stradb	ENSMUSG0000026027	STE20-related kinase adaptor beta Source MGI Symbol Acc MGI 2144047
G03	SBM1026602	ENSMUST00000115181.8	Telo2	ENSMUSG0000024170	telomere maintenance 2 Source MGI Symbol Acc MGI 1918968
G04	SBM0841427	ENSMUST00000108657.3	Trp53	ENSMUSG0000059552	transformation related protein 53 Source MGI Symbol Acc MGI 98834
G05	SBM1061191	ENSMUST00000124507.1	Tsc1	ENSMUSG0000026812	tuberous sclerosis 1 Source MGI Symbol Acc MGI 1929183
G06	SBM0757000	ENSMUST00000228412.1	Tsc2	ENSMUSG0000002496	tuberous sclerosis 2 Source MGI Symbol Acc MGI 102548
G07	SBM0718433	ENSMUST00000198470.1	Ulk1	ENSMUSG0000029512	unc-51 like kinase 1 Source MGI Symbol Acc MGI 1270126
G08	SBM1002573	ENSMUST00000157049.1	Ulk2	ENSMUSG0000004798	unc-51 like kinase 2 Source MGI Symbol Acc MGI 1352758
G09	SBM1079198	ENSMUST00000217017.1	Vegfa	ENSMUSG0000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
G10	SBM0920136	ENSMUST00000130048.7	Vegfb	ENSMUSG0000024962	vascular endothelial growth factor B Source MGI Symbol Acc MGI 106199
G11	SBM0863177	ENSMUST00000209703.1	Vegfc	ENSMUSG0000031520	vascular endothelial growth factor C Source MGI Symbol Acc MGI 109124
G12	SBM0737251	ENSMUST00000146206.1	Ywhaq	ENSMUSG0000076432	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein theta Source MGI Symbol Acc MGI 891963
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.

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.

Trademarks: QIAGEN®, LNA®, QuantiNova®, Sample to Insight® (QIAGEN Group); SYBR® (Life Technologies Corp.). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law.

09/2019 © 2019 QIAGEN, all rights reserved.