

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

Mouse Insulin Signaling Pathway

Cat. no. 249950 SBMM-030ZA

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 | Acaca | Acax1 | Adra1d | Aebp1 | Akt1 | Akt2 | Akt3 | Araf | Bcl2l1 | Braf | Cap1 | Cbl |
| B | Cebpa | Cebpb | Cfd | Dok1 | Dok2 | Dok3 | Dusp14 | Eif2b1 | Eif4ebp1 | Erc1 | Fbp1 | Fos |
| C | Frs2 | Frs3 | G6pc | G6pc2 | Gab1 | Gck | Gpd1 | Grb10 | Grb2 | Gsk3b | Hk2 | Hras |
| D | Igf1r | Igf2 | Igfbp1 | Ins1 | Ins3 | Irs1 | Irs2 | Jun | KIF10 | Kras | Ldlr | Lep |
| E | Map2k1 | Mapk1 | Mtor | Nck1 | Nos2 | Npy | Pck2 | Pdjk1 | Pik3ca | Pik3cb | Pik3r1 | Pik3r2 |
| F | Pikr | Pparg | Ppp1ca | Prkcg | Prkci | Prkcz | Prl | Ptpn1 | Ptprf | Raf1 | Reln | Rps6ka1 |
| G | Rras | Rras2 | Serpine1 | Shc1 | Slc27a4 | Slc2a1 | Sorbs1 | Sos1 | Srebf1 | Tg | Ucp1 | Vegfa |
| 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 | SBM0933576 | ENSMUST00000133811.2 | Acaca | ENSMUSG0000020532 | acetyl-Coenzyme A carboxylase alpha Source MGI Symbol Acc MGI 108451 |
| A02 | SBM1069471 | ENSMUST00000066587.11 | Acox1 | ENSMUSG0000020777 | acyl-Coenzyme A oxidase 1, palmitoyl Source MGI Symbol Acc MGI 1330812 |
| A03 | SBM0697937 | ENSMUST00000103184.3 | Adra1d | ENSMUSG0000027335 | adrenergic receptor, alpha 1d Source MGI Symbol Acc MGI 106673 |
| A04 | SBM0724164 | ENSMUST00000109829.1 | Aebp1 | ENSMUSG0000020473 | AE binding protein 1 Source MGI Symbol Acc MGI 1197012 |
| A05 | SBM1020452 | ENSMUST00000144550.8 | Akt1 | ENSMUSG0000001729 | thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986 |
| A06 | SBM0882867 | ENSMUST00000051356.11 | Akt2 | ENSMUSG0000004056 | thymoma viral proto-oncogene 2 Source MGI Symbol Acc MGI 104874 |
| A07 | SBM0683049 | ENSMUST00000019843.14 | Akt3 | ENSMUSG0000019699 | thymoma viral proto-oncogene 3 Source MGI Symbol Acc MGI 1345147 |
| A08 | SBM0848565 | ENSMUST00000152955.7 | Araf | ENSMUSG0000001127 | Araf proto-oncogene, serine/threonine kinase Source MGI Symbol Acc MGI 88065 |
| A09 | SBM0751583 | ENSMUST00000134357.1 | Bcl2l1 | ENSMUSG0000007659 | BCL2-like 1 Source MGI Symbol Acc MGI 88139 |
| A10 | SBM1018224 | ENSMUST00000169647.1 | Braf | ENSMUSG0000002413 | Braf transforming gene Source MGI Symbol Acc MGI 88190 |
| A11 | SBM1033810 | ENSMUST00000106255.7 | Cap1 | ENSMUSG0000028656 | CAP, adenylate cyclase-associated protein 1 (yeast) Source MGI Symbol Acc MGI 88262 |
| A12 | SBM0972680 | ENSMUST00000037644.7 | Cbl | ENSMUSG0000034342 | Casitas B-lineage lymphoma Source MGI Symbol Acc MGI 88279 |
| B01 | SBM0970317 | ENSMUST00000205391.1 | Cebpa | ENSMUSG0000034957 | CCAAT/enhancer binding protein (C/EBP), alpha Source MGI Symbol Acc MGI 99480 |
| B02 | SBM0682459 | ENSMUST00000070642.3 | Cebpb | ENSMUSG0000056501 | CCAAT/enhancer binding protein (C/EBP), beta Source MGI Symbol Acc MGI 88373 |
| B03 | SBM0729233 | ENSMUST00000061653.8 | Cfd | ENSMUSG0000061780 | complement factor D (adipsin) Source MGI Symbol Acc MGI 87931 |
| B04 | SBM0785101 | ENSMUST00000204900.1 | Dok1 | ENSMUSG0000068335 | docking protein 1 Source MGI Symbol Acc MGI 893587 |
| B05 | SBM0890382 | ENSMUST00000171481.1 | Dok2 | ENSMUSG0000022102 | docking protein 2 Source MGI Symbol Acc MGI 1332623 |
| B06 | SBM0966847 | ENSMUST00000047877.4 | Dok3 | ENSMUSG0000035711 | docking protein 3 Source MGI Symbol Acc MGI 1351490 |
| B07 | SBM0955098 | ENSMUST00000018792.11 | Dusp14 | ENSMUSG0000018648 | dual specificity phosphatase 14 Source MGI Symbol Acc MGI 1927168 |
| B08 | SBM1011200 | ENSMUST00000135361.7 | Eif2b1 | ENSMUSG0000029388 | eukaryotic translation initiation factor 2B, subunit 1 (alpha) Source MGI Symbol Acc MGI 2384802 |
| B09 | SBM1066112 | ENSMUST00000033880.6 | Eif4ebp1 | ENSMUSG0000031490 | eukaryotic translation initiation factor 4E binding protein 1 Source MGI Symbol Acc MGI 103267 |
| B10 | SBM0942819 | ENSMUST00000003645.8 | Erc1 | ENSMUSG0000003549 | excision repair cross-complementing rodent repair deficiency, complementation group 1 Source MGI Symbol Acc MGI 95412 |
| B11 | SBM0968769 | ENSMUST00000092888.10 | Fbp1 | ENSMUSG0000069805 | fructose bisphosphatase 1 Source MGI Symbol Acc MGI 95492 |
| B12 | SBM0977461 | ENSMUST00000134311.1 | Fos | ENSMUSG0000021250 | FBJ osteosarcoma oncogene Source MGI Symbol Acc MGI 95574 |
| C01 | SBM1093442 | ENSMUST00000219483.1 | Frs2 | ENSMUSG0000020170 | fibroblast growth factor receptor substrate 2 Source MGI Symbol Acc MGI 1100860 |
| C02 | SBM1066068 | ENSMUST00000113296.7 | Frs3 | ENSMUSG0000023266 | fibroblast growth factor receptor substrate 3 Source MGI Symbol Acc MGI 2135965 |
| C03 | SBM0872131 | ENSMUST00000019469.2 | G6pc | ENSMUSG0000078650 | glucose-6-phosphatase, catalytic Source MGI Symbol Acc MGI 95607 |
| C04 | SBM0977596 | ENSMUST00000112317.2 | G6pc2 | ENSMUSG0000005232 | glucose-6-phosphatase, catalytic, 2 Source MGI Symbol Acc MGI 1277193 |
| C05 | SBM0848661 | ENSMUST00000210676.1 | Gab1 | ENSMUSG0000031714 | growth factor receptor bound protein 2-associated protein 1 Source MGI Symbol Acc MGI 108088 |
| C06 | SBM1029217 | ENSMUST00000109822.7 | Gck | ENSMUSG0000041798 | glucokinase Source MGI Symbol Acc MGI 1270854 |
| C07 | SBM0849967 | ENSMUST00000161768.1 | Gpd1 | ENSMUSG0000023019 | glycerol-3-phosphate dehydrogenase 1 (soluble) Source MGI Symbol Acc MGI 95679 |
| C08 | SBM0853557 | ENSMUST00000109653.7 | Grb10 | ENSMUSG0000020176 | growth factor receptor bound protein 10 Source MGI Symbol Acc MGI 103232 |
| C09 | SBM1054562 | ENSMUST00000106497.7 | Grb2 | ENSMUSG0000059923 | growth factor receptor bound protein 2 Source MGI Symbol Acc MGI 95805 |
| C10 | SBM0862470 | ENSMUST00000132057.1 | Gsk3b | ENSMUSG0000022812 | glycogen synthase kinase 3 beta Source MGI Symbol Acc MGI 1861437 |
| | | ENSMUST00000 | | ENSMUSG00 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|-----------------------|--------|-------------------|----------------------------------------------------------------------------------------------------------|
| C11 | SBM1068583 | 000642.10 | Hk2 | 000000628 | hexokinase 2 Source MGI Symbol Acc MGI 1315197 |
| C12 | SBM0815785 | ENSMUST00000097957.10 | Hras | ENSMUSG0000025499 | Harvey rat sarcoma virus oncogene Source MGI Symbol Acc MGI 96224 |
| D01 | SBM0769269 | ENSMUST00000207621.1 | Igf1r | ENSMUSG0000005533 | insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433 |
| D02 | SBM0905480 | ENSMUST00000121128.7 | Igf2 | ENSMUSG0000048583 | insulin-like growth factor 2 Source MGI Symbol Acc MGI 96434 |
| D03 | SBM0763834 | ENSMUST0000020704.7 | Igfbp1 | ENSMUSG0000020429 | insulin-like growth factor binding protein 1 Source MGI Symbol Acc MGI 96436 |
| D04 | SBM0872440 | ENSMUST00000039652.5 | Ins1 | ENSMUSG0000035804 | insulin I Source MGI Symbol Acc MGI 96572 |
| D05 | SBM1065189 | ENSMUST00000034261.7 | InsI3 | ENSMUSG0000079019 | insulin-like 3 Source MGI Symbol Acc MGI 108427 |
| D06 | SBM0923271 | ENSMUST00000069799.2 | Irs1 | ENSMUSG0000055980 | insulin receptor substrate 1 Source MGI Symbol Acc MGI 99454 |
| D07 | SBM0792647 | ENSMUST00000040514.7 | Irs2 | ENSMUSG0000038894 | insulin receptor substrate 2 Source MGI Symbol Acc MGI 109334 |
| D08 | SBM1045409 | ENSMUST00000107094.1 | Jun | ENSMUSG0000052684 | jun proto-oncogene Source MGI Symbol Acc MGI 96646 |
| D09 | SBM1054966 | ENSMUST00000074043.6 | Klf10 | ENSMUSG0000037465 | Kruppel-like factor 10 Source MGI Symbol Acc MGI 1101353 |
| D10 | SBM1059793 | ENSMUST00000203147.2 | Kras | ENSMUSG0000030265 | Kirsten rat sarcoma viral oncogene homolog Source MGI Symbol Acc MGI 96680 |
| D11 | SBM0960715 | ENSMUST00000217111.1 | Ldlr | ENSMUSG0000032193 | low density lipoprotein receptor Source MGI Symbol Acc MGI 96765 |
| D12 | SBM0718370 | ENSMUST00000169505.1 | Lep | ENSMUSG0000059201 | leptin Source MGI Symbol Acc MGI 104663 |
| E01 | SBM1025120 | ENSMUST00000005066.8 | Map2k1 | ENSMUSG0000004936 | mitogen-activated protein kinase kinase 1 Source MGI Symbol Acc MGI 1346866 |
| E02 | SBM0800614 | ENSMUST00000231821.1 | Mapk1 | ENSMUSG0000063358 | mitogen-activated protein kinase 1 Source MGI Symbol Acc MGI 1346858 |
| E03 | SBM1220565 | ENSMUST00000103221.9 | Mtor | ENSMUSG0000028991 | mechanistic target of rapamycin kinase Source MGI Symbol Acc MGI 1928394 |
| E04 | SBM0730618 | ENSMUST00000188670.1 | Nck1 | ENSMUSG0000032475 | non-catalytic region of tyrosine kinase adaptor protein 1 Source MGI Symbol Acc MGI 109601 |
| E05 | SBM0835086 | ENSMUST00000208783.1 | Nos2 | ENSMUSG0000020826 | nitric oxide synthase 2, inducible Source MGI Symbol Acc MGI 97361 |
| E06 | SBM0865432 | ENSMUST00000031843.6 | Npy | ENSMUSG0000029819 | neuropeptide Y Source MGI Symbol Acc MGI 97374 |
| E07 | SBM1060112 | ENSMUST00000228921.1 | Pck2 | ENSMUSG0000040618 | phosphoenolpyruvate carboxykinase 2 (mitochondrial) Source MGI Symbol Acc MGI 1860456 |
| E08 | SBM0716432 | ENSMUST00000115409.8 | Pdpk1 | ENSMUSG0000024122 | 3-phosphoinositide dependent protein kinase 1 Source MGI Symbol Acc MGI 1338068 |
| E09 | SBM0905151 | ENSMUST00000108243.7 | Pik3ca | ENSMUSG0000027665 | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source MGI Symbol Acc MGI 1206581 |
| E10 | SBM1012041 | ENSMUST00000124723.1 | Pik3cb | ENSMUSG0000032462 | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta Source MGI Symbol Acc MGI 1922019 |
| E11 | SBM0805909 | ENSMUST00000035532.12 | Pik3r1 | ENSMUSG0000041417 | phosphoinositide-3-kinase regulatory subunit 1 Source MGI Symbol Acc MGI 97583 |
| E12 | SBM0859782 | ENSMUST00000154685.1 | Pik3r2 | ENSMUSG0000031834 | phosphoinositide-3-kinase regulatory subunit 2 Source MGI Symbol Acc MGI 1098772 |
| F01 | SBM0893001 | ENSMUST00000127058.1 | Pklr | ENSMUSG0000041237 | pyruvate kinase liver and red blood cell Source MGI Symbol Acc MGI 97604 |
| F02 | SBM1015614 | ENSMUST00000205213.2 | Pparg | ENSMUSG0000000440 | peroxisome proliferator activated receptor gamma Source MGI Symbol Acc MGI 97747 |
| F03 | SBM0679454 | ENSMUST00000046094.5 | Ppp1ca | ENSMUSG0000040385 | protein phosphatase 1 catalytic subunit alpha Source MGI Symbol Acc MGI 103016 |
| F04 | SBM1062071 | ENSMUST00000100301.10 | Prkcg | ENSMUSG0000078816 | protein kinase C, gamma Source MGI Symbol Acc MGI 97597 |
| F05 | SBM0705298 | ENSMUST00000108249.8 | Prkci | ENSMUSG0000037643 | protein kinase C, iota Source MGI Symbol Acc MGI 99260 |
| F06 | SBM0723762 | ENSMUST00000139647.7 | Prkcz | ENSMUSG0000029053 | protein kinase C, zeta Source MGI Symbol Acc MGI 97602 |
| F07 | SBM0899700 | ENSMUST00000110369.9 | Prl | ENSMUSG0000021342 | prolactin Source MGI Symbol Acc MGI 97762 |
| F08 | SBM0939941 | ENSMUST00000142717.1 | Ptfn1 | ENSMUSG0000027540 | protein tyrosine phosphatase, non-receptor type 1 Source MGI Symbol Acc MGI 97805 |
| F09 | SBM1018909 | ENSMUST00000123484.1 | Ptprf | ENSMUSG0000033295 | protein tyrosine phosphatase, receptor type, F Source MGI Symbol Acc MGI 102695 |
| F10 | SBM0974573 | ENSMUST00000124553.3 | Raf1 | ENSMUSG0000000441 | v-raf-leukemia viral oncogene 1 Source MGI Symbol Acc MGI 97847 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|-----------------------|----------|-------------------|-----------------------------------------------------------------------------------------------------|
| F11 | SBM0984170 | ENSMUST00000012849.14 | Retn | ENSMUSG0000012705 | resistin Source MGI Symbol Acc MGI 1888506 |
| F12 | SBM0679686 | ENSMUST00000105894.10 | Rps6ka1 | ENSMUSG0000003644 | ribosomal protein S6 kinase polypeptide 1 Source MGI Symbol Acc MGI 104558 |
| G01 | SBM0942809 | ENSMUST00000044111.9 | Rras | ENSMUSG0000038387 | related RAS viral (r-ras) oncogene Source MGI Symbol Acc MGI 98179 |
| G02 | SBM0750217 | ENSMUST00000210075.1 | Rras2 | ENSMUSG0000055723 | related RAS viral (r-ras) oncogene 2 Source MGI Symbol Acc MGI 1914172 |
| G03 | SBM0809699 | ENSMUST00000041388.10 | Serpine1 | ENSMUSG0000037411 | serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608 |
| G04 | SBM0684894 | ENSMUST00000128238.7 | Shc1 | ENSMUSG0000042626 | src homology 2 domain-containing transforming protein C1 Source MGI Symbol Acc MGI 98296 |
| G05 | SBM0823234 | ENSMUST00000136444.1 | Slc27a4 | ENSMUSG0000059316 | solute carrier family 27 (fatty acid transporter), member 4 Source MGI Symbol Acc MGI 1347347 |
| G06 | SBM1008931 | ENSMUST00000144329.7 | Slc2a1 | ENSMUSG0000028645 | solute carrier family 2 (facilitated glucose transporter), member 1 Source MGI Symbol Acc MGI 95755 |
| G07 | SBM1083181 | ENSMUST00000224667.1 | Sorbs1 | ENSMUSG0000025006 | sorbin and SH3 domain containing 1 Source MGI Symbol Acc MGI 700014 |
| G08 | SBM0687483 | ENSMUST00000234841.1 | Sos1 | ENSMUSG0000024241 | SOS Ras/Rac guanine nucleotide exchange factor 1 Source MGI Symbol Acc MGI 98354 |
| G09 | SBM0984070 | ENSMUST00000020846.7 | Srebf1 | ENSMUSG0000020538 | sterol regulatory element binding transcription factor 1 Source MGI Symbol Acc MGI 107606 |
| G10 | SBM0962912 | ENSMUST00000166403.1 | Tg | ENSMUSG0000053469 | thyroglobulin Source MGI Symbol Acc MGI 98733 |
| G11 | SBM1037476 | ENSMUST00000034146.4 | Ucp1 | ENSMUSG0000031710 | uncoupling protein 1 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 98894 |
| G12 | SBM1079198 | ENSMUST00000217017.1 | Vegfa | ENSMUSG0000023951 | vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178 |
| 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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