

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

Mouse Cell Cycle

Cat. no. 249950 SBMM-020ZR

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 (Rotor-Gene): QuantiNova LNA 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 PCR System Handbook at www.qiagen.com for further details.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|--------|-------|-------|-------|----------|-------|--------|--------|---------|--------|--------|--------|
| A | Abl1 | Atm | Atr | Aurka | Aurkb | Bcl2 | Birc5 | Brccl | Brccl2 | Casp3 | Ccna1 | Ccna2 |
| B | Ccnb1 | Ccnb2 | Ccnc | Ccnd1 | Ccnd2 | Ccnd3 | Ccne1 | Ccnf | Cdc20 | Cdc25a | Cdc25c | Cdc6 |
| C | Cdc7 | Cdk1 | Cdk2 | Cdk4 | Cdk5rap1 | Cdk6 | Cdkn1a | Cdkn1b | Cdkn2a | Cdkn2b | Cdkn3 | Chek1 |
| D | Chek2 | Cks1b | Ddit3 | Dst | E2f1 | E2f2 | E2f3 | E2f4 | Gadd45a | Gpr132 | Hus1 | Hgb1 |
| E | Mad2l1 | Mcm2 | Mcm3 | Mcm4 | Mdm2 | Mki67 | Mre11a | Meh2 | Myb | Nbn | Nek2 | Notch2 |
| F | Plk1 | Pmp22 | Ppm1d | Rad17 | Rad21 | Rad51 | Rad9a | Ran | Rb1 | Rbl1 | Rbl2 | Sfn |
| G | Shc1 | Skp2 | Sln1 | Smc1a | Stag1 | Stmn1 | Terf1 | Tfdp1 | Trp53 | Trp63 | Tsg101 | Wee1 |
| 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 | SBM0745660 | ENSMUST00000150244.1 | Atm | ENSMUSG0000034218 | ataxia telangiectasia mutated Source MGI Symbol Acc MGI 107202 |
| A03 | SBM0707457 | ENSMUST00000189602.6 | Atr | ENSMUSG0000032409 | ataxia telangiectasia and Rad3 related Source MGI Symbol Acc MGI 108028 |
| A04 | SBM0964097 | ENSMUST00000028997.7 | Aurka | ENSMUSG0000027496 | aurora kinase A Source MGI Symbol Acc MGI 894678 |
| A05 | SBM0735299 | ENSMUST00000126576.1 | Aurkb | ENSMUSG0000020897 | aurora kinase B Source MGI Symbol Acc MGI 107168 |
| A06 | SBM0876340 | ENSMUST00000189999.1 | Bcl2 | ENSMUSG0000057329 | B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138 |
| A07 | SBM0773958 | ENSMUST00000081387.10 | Birc5 | ENSMUSG0000017716 | baculoviral IAP repeat-containing 5 Source MGI Symbol Acc MGI 1203517 |
| 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 | SBM0732165 | ENSMUST00000093517.6 | Casp3 | ENSMUSG0000031628 | caspase 3 Source MGI Symbol Acc MGI 107739 |
| A11 | SBM0877611 | ENSMUST00000197238.4 | Ccna1 | ENSMUSG0000027793 | cyclin A1 Source MGI Symbol Acc MGI 108042 |
| A12 | SBM0908421 | ENSMUST00000029270.9 | Ccna2 | ENSMUSG0000027715 | cyclin A2 Source MGI Symbol Acc MGI 108069 |
| B01 | SBM0677113 | ENSMUST00000147790.1 | Ccnb1 | ENSMUSG0000041431 | cyclin B1 Source MGI Symbol Acc MGI 88302 |
| B02 | SBM0976587 | ENSMUST00000034742.7 | Ccnb2 | ENSMUSG0000032218 | cyclin B2 Source MGI Symbol Acc MGI 88311 |
| B03 | SBM0927838 | ENSMUST00000120679.7 | Ccnc | ENSMUSG0000028252 | cyclin C Source MGI Symbol Acc MGI 1858199 |
| B04 | SBM0706150 | ENSMUST00000093962.4 | Ccnd1 | ENSMUSG0000070348 | cyclin D1 Source MGI Symbol Acc MGI 88313 |
| B05 | SBM0977018 | ENSMUST00000201066.1 | Ccnd2 | ENSMUSG0000000184 | cyclin D2 Source MGI Symbol Acc MGI 88314 |
| B06 | SBM0907619 | ENSMUST00000182935.7 | Ccnd3 | ENSMUSG0000034165 | cyclin D3 Source MGI Symbol Acc MGI 88315 |
| B07 | SBM0866938 | ENSMUST00000124979.2 | Ccne1 | ENSMUSG0000002068 | cyclin E1 Source MGI Symbol Acc MGI 88316 |
| B08 | SBM0679909 | ENSMUST00000234491.1 | Ccnf | ENSMUSG0000072082 | cyclin F Source MGI Symbol Acc MGI 102551 |
| B09 | SBM0827848 | ENSMUST00000183942.1 | Cdc20 | ENSMUSG0000006398 | cell division cycle 20 Source MGI Symbol Acc MGI 1859866 |
| B10 | SBM0768186 | ENSMUST00000199787.2 | Cdc25a | ENSMUSG0000032477 | cell division cycle 25A Source MGI Symbol Acc MGI 103198 |
| B11 | SBM0971821 | ENSMUST00000060710.8 | Cdc25c | ENSMUSG0000044201 | cell division cycle 25C Source MGI Symbol Acc MGI 88350 |
| B12 | SBM0867085 | ENSMUST00000133779.8 | Cdc6 | ENSMUSG0000017499 | cell division cycle 6 Source MGI Symbol Acc MGI 1345150 |
| C01 | SBM0728311 | ENSMUST00000076467.12 | Cdc7 | ENSMUSG0000029283 | cell division cycle 7 (<i>S. cerevisiae</i>) Source MGI Symbol Acc MGI 1309511 |
| C02 | SBM0979951 | ENSMUST00000129444.7 | Cdk1 | ENSMUSG0000019942 | cyclin-dependent kinase 1 Source MGI Symbol Acc MGI 88351 |
| C03 | SBM1030284 | ENSMUST00000219601.1 | Cdk2 | ENSMUSG0000025358 | cyclin-dependent kinase 2 Source MGI Symbol Acc MGI 104772 |
| C04 | SBM0702559 | ENSMUST00000120226.7 | Cdk4 | ENSMUSG0000006728 | cyclin-dependent kinase 4 Source MGI Symbol Acc MGI 88357 |
| C05 | SBM1082595 | ENSMUST00000109731.7 | Cdk5rap1 | ENSMUSG0000027487 | CDK5 regulatory subunit associated protein 1 Source MGI Symbol Acc MGI 1914221 |
| C06 | SBM0726060 | ENSMUST00000165117.7 | Cdk6 | ENSMUSG0000040274 | cyclin-dependent kinase 6 Source MGI Symbol Acc MGI 1277162 |
| C07 | SBM1034022 | ENSMUST00000023829.7 | Cdkn1a | ENSMUSG0000023067 | cyclin-dependent kinase inhibitor 1A (P21) Source MGI Symbol Acc MGI 104556 |
| C08 | SBM1006924 | ENSMUST00000067327.10 | Cdkn1b | ENSMUSG0000003031 | cyclin-dependent kinase inhibitor 1B Source MGI Symbol Acc MGI 104565 |
| C09 | SBM0998051 | ENSMUST00000060501.4 | Cdkn2a | ENSMUSG0000044303 | cyclin dependent kinase inhibitor 2A Source MGI Symbol Acc MGI 104738 |
| C10 | SBM1002560 | ENSMUST00000097981.5 | Cdkn2b | ENSMUSG0000073802 | cyclin dependent kinase inhibitor 2B Source MGI Symbol Acc MGI 104737 |
| | | ENSMUST00000 | | ENSMUSG00 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|---------------------------|---------|------------------------|--|
| C11 | SBM0877525 | 067426.5 | Cdkn3 | 000037628 | cyclin-dependent kinase inhibitor 3 Source MGI Symbol Acc MGI 1919641 |
| C12 | SBM0725925 | ENSMUST00000 173963.8 | Chek1 | ENSMUSG00 000032113 | checkpoint kinase 1 Source MGI Symbol Acc MGI 1202065 |
| D01 | SBM0884188 | ENSMUST00000 066160.2 | Chek2 | ENSMUSG00 000029521 | checkpoint kinase 2 Source MGI Symbol Acc MGI 1355321 |
| D02 | SBM0940530 | ENSMUST00000 107422.1 | Cks1b | ENSMUSG00 000028044 | CDC28 protein kinase 1b Source MGI Symbol Acc MGI 1889208 |
| D03 | SBM0724182 | ENSMUST00000 139091.1 | Ddit3 | ENSMUSG00 000025408 | DNA-damage inducible transcript 3 Source MGI Symbol Acc MGI 109247 |
| D04 | SBM0918512 | ENSMUST00000 183331.7 | Dst | ENSMUSG00 000026131 | dystonin Source MGI Symbol Acc MGI 104627 |
| D05 | SBM0678575 | ENSMUST00000 000894.5 | E2f1 | ENSMUSG00 000027490 | E2F transcription factor 1 Source MGI Symbol Acc MGI 101941 |
| D06 | SBM0845229 | ENSMUST00000 149750.1 | E2f2 | ENSMUSG00 000018983 | E2F transcription factor 2 Source MGI Symbol Acc MGI 1096341 |
| D07 | SBM0884968 | ENSMUST00000 102948.10 | E2f3 | ENSMUSG00 000016477 | E2F transcription factor 3 Source MGI Symbol Acc MGI 1096340 |
| D08 | SBM1013821 | ENSMUST00000 015003.9 | E2f4 | ENSMUSG00 000014859 | E2F transcription factor 4 Source MGI Symbol Acc MGI 103012 |
| D09 | SBM0962210 | ENSMUST00000 151958.1 | Gadd45a | ENSMUSG00 000036390 | growth arrest and DNA-damage-inducible 45 alpha Source MGI Symbol Acc MGI 107799 |
| D10 | SBM1040199 | ENSMUST00000 222776.1 | Gpr132 | ENSMUSG00 000021298 | G protein-coupled receptor 132 Source MGI Symbol Acc MGI 1890220 |
| D11 | SBM0890659 | ENSMUST00000 127578.1 | Hus1 | ENSMUSG00 000020413 | HUS1 checkpoint clamp component Source MGI Symbol Acc MGI 1277962 |
| D12 | SBM0691612 | ENSMUST00000 090006.11 | Itgb1 | ENSMUSG00 000025809 | integrin beta 1 (fibronectin receptor beta) Source MGI Symbol Acc MGI 96610 |
| E01 | SBM0850456 | ENSMUST00000 101343.1 | Mad2l1 | ENSMUSG00 000029910 | MAD2 mitotic arrest deficient-like 1 Source MGI Symbol Acc MGI 1860374 |
| E02 | SBM1084871 | ENSMUST00000 058011.7 | Mcm2 | ENSMUSG00 000002870 | minichromosome maintenance complex component 2 Source MGI Symbol Acc MGI 105380 |
| E03 | SBM0704691 | ENSMUST00000 185296.1 | Mcm3 | ENSMUSG00 000041859 | minichromosome maintenance complex component 3 Source MGI Symbol Acc MGI 101845 |
| E04 | SBM0844518 | ENSMUST00000 230437.1 | Mcm4 | ENSMUSG00 000022673 | minichromosome maintenance complex component 4 Source MGI Symbol Acc MGI 103199 |
| E05 | SBM0989223 | ENSMUST00000 020408.15 | Mdm2 | ENSMUSG00 000020184 | transformed mouse 3T3 cell double minute 2 Source MGI Symbol Acc MGI 96952 |
| E06 | SBM0976366 | ENSMUST00000 211238.1 | Mki67 | ENSMUSG00 000031004 | antigen identified by monoclonal antibody Ki 67 Source MGI Symbol Acc MGI 106035 |
| E07 | SBM0787147 | ENSMUST00000 215820.1 | Mre11a | ENSMUSG00 000031928 | MRE11A homolog A, double strand break repair nuclease Source MGI Symbol Acc MGI 1100512 |
| E08 | SBM0831857 | ENSMUST00000 172855.1 | Msh2 | ENSMUSG00 000024151 | mutS homolog 2 Source MGI Symbol Acc MGI 101816 |
| E09 | SBM0801960 | ENSMUST00000 020158.8 | Myb | ENSMUSG00 000019982 | myeloblastosis oncogene Source MGI Symbol Acc MGI 97249 |
| E10 | SBM0680530 | ENSMUST00000 029879.14 | Nbn | ENSMUSG00 000028224 | nibrin Source MGI Symbol Acc MGI 1351625 |
| E11 | SBM0686823 | ENSMUST00000 150839.1 | Nek2 | ENSMUSG00 000026622 | NIMA (never in mitosis gene a)-related expressed kinase 2 Source MGI Symbol Acc MGI 109359 |
| E12 | SBM0724048 | ENSMUST00000 079812.7 | Notch2 | ENSMUSG00 000027878 | notch 2 Source MGI Symbol Acc MGI 97364 |
| F01 | SBM0973476 | ENSMUST00000 228581.1 | Pkd1 | ENSMUSG00 000032855 | polycystin 1, transient receptor potential channel interacting Source MGI Symbol Acc MGI 97603 |
| F02 | SBM0727313 | ENSMUST00000 140648.1 | Pmp22 | ENSMUSG00 000018217 | peripheral myelin protein 22 Source MGI Symbol Acc MGI 97631 |
| F03 | SBM0864740 | ENSMUST00000 020835.15 | Ppm1d | ENSMUSG00 000020525 | protein phosphatase 1D magnesium-dependent, delta isoform Source MGI Symbol Acc MGI 1858214 |
| F04 | SBM0733888 | ENSMUST00000 022136.13 | Rad17 | ENSMUSG00 000021635 | RAD17 checkpoint clamp loader component Source MGI Symbol Acc MGI 1333807 |
| F05 | SBM0870390 | ENSMUST00000 226529.1 | Rad21 | ENSMUSG00 000022314 | RAD21 cohesin complex component Source MGI Symbol Acc MGI 108016 |
| F06 | SBM0702001 | ENSMUST00000 110828.1 | Rad51 | ENSMUSG00 000027323 | RAD51 recombinase Source MGI Symbol Acc MGI 97890 |
| F07 | SBM0843955 | ENSMUST00000 237278.1 | Rad9a | ENSMUSG00 000024824 | RAD9 checkpoint clamp component A Source MGI Symbol Acc MGI 1328356 |
| F08 | SBM0899361 | ENSMUST00000 111343.1 | Ran | ENSMUSG00 000029430 | RAN, member RAS oncogene family Source MGI Symbol Acc MGI 1333112 |
| F09 | SBM0795530 | ENSMUST00000 168495.1 | Rb1 | ENSMUSG00 000022105 | RB transcriptional corepressor 1 Source MGI Symbol Acc MGI 97874 |
| F10 | SBM1034359 | ENSMUST00000 141296.1 | Rbl1 | ENSMUSG00 000027641 | RB transcriptional corepressor like 1 Source MGI Symbol Acc MGI 103300 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|-----------------------|----------|--------------------|---|
| F11 | SBM1089037 | ENSMUST00000144190.7 | Rbl2 | ENSMUSG00000031666 | RB transcriptional corepressor like 2 Source MGI Symbol Acc MGI 105085 |
| F12 | SBM1012777 | ENSMUST00000057311.3 | Sfn | ENSMUSG00000047281 | stratifin Source MGI Symbol Acc MGI 1891831 |
| G01 | SBM0684894 | ENSMUST00000128238.7 | Shc1 | ENSMUSG00000042626 | src homology 2 domain-containing transforming protein C1 Source MGI Symbol Acc MGI 98296 |
| G02 | SBM0771788 | ENSMUST00000096482.9 | Skp2 | ENSMUSG00000054115 | S-phase kinase-associated protein 2 (p45) Source MGI Symbol Acc MGI 1351663 |
| G03 | SBM0704895 | ENSMUST00000037994.7 | Sfn1 | ENSMUSG00000078763 | schlafen 1 Source MGI Symbol Acc MGI 1313259 |
| G04 | SBM1046284 | ENSMUST00000045312.5 | Smc1a | ENSMUSG00000041133 | structural maintenance of chromosomes 1A Source MGI Symbol Acc MGI 1344345 |
| G05 | SBM0914524 | ENSMUST00000123315.7 | Stag1 | ENSMUSG00000037286 | stromal antigen 1 Source MGI Symbol Acc MGI 1098658 |
| G06 | SBM0820556 | ENSMUST00000130253.1 | Stmn1 | ENSMUSG00000028832 | stathmin 1 Source MGI Symbol Acc MGI 96739 |
| G07 | SBM1006727 | ENSMUST00000027057.7 | Terf1 | ENSMUSG00000025925 | telomeric repeat binding factor 1 Source MGI Symbol Acc MGI 109634 |
| G08 | SBM0901879 | ENSMUST00000170909.1 | Tfdp1 | ENSMUSG00000038482 | transcription factor Dp 1 Source MGI Symbol Acc MGI 101934 |
| G09 | SBM0841427 | ENSMUST00000108657.3 | Trp53 | ENSMUSG00000059552 | transformation related protein 53 Source MGI Symbol Acc MGI 98834 |
| G10 | SBM1225399 | ENSMUST00000115306.7 | Trp63 | ENSMUSG00000022510 | transformation related protein 63 Source MGI Symbol Acc MGI 1330810 |
| G11 | SBM0905863 | ENSMUST00000209538.1 | Tsg101 | ENSMUSG00000014402 | tumor susceptibility gene 101 Source MGI Symbol Acc MGI 106581 |
| G12 | SBM0782254 | ENSMUST00000033326.9 | Wee1 | ENSMUSG00000031016 | WEE 1 homolog 1 (S. pombe) Source MGI Symbol Acc MGI 103075 |
| H01 | SBM1220560 | ENSMUST00000100497.10 | Actb | ENSMUSG00000029580 | actin, beta Source MGI Symbol Acc MGI 87904 |
| H02 | SBM0675336 | ENSMUST00000102476.4 | B2m | ENSMUSG00000060802 | beta-2 microglobulin Source MGI Symbol Acc MGI 88127 |
| H03 | SBM1220562 | ENSMUST00000117757.8 | Gapdh | ENSMUSG00000057666 | glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640 |
| H04 | SBM1220563 | ENSMUST00000026613.13 | Gusb | ENSMUSG00000025534 | glucuronidase, beta Source MGI Symbol Acc MGI 95872 |
| H05 | SBM1220564 | ENSMUST00000166469.7 | Hsp90ab1 | ENSMUSG00000023944 | 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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