

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

## Rat Cytoskeleton Regulators

Cat. no. 249950 SBRN-088ZR

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](http://www.qiagen.com) for further details.

|   | 1        | 2        | 3        | 4      | 5       | 6                | 7       | 8                | 9        | 10     | 11     | 12    |
|---|----------|----------|----------|--------|---------|------------------|---------|------------------|----------|--------|--------|-------|
| A | Actr2    | Actr3    | Arap1    | Arfp2  | Arhgap5 | Arhgdib          | Arhgef1 | Arhgef11         | Arpc1b   | Arpc2  | Arpc3  | Arpc4 |
| B | Arpc5    | Aurka    | Aurkb    | Aurkc  | Baiap2  | Cald1            | Calm1   | LOC1009105<br>06 | Ccna1    | Ccnb1  | Ccnf   | Cdc42 |
| C | Cdc42bpa | Cdc42ep2 | Cdc42ep3 | Cdk5   | Cdk5r1  | Cfl1             | Cit     | Closp1           | Closp2   | Clip1  | Clip2  | Crk   |
| D | Cttn     | Cyflp1   | Cyflp2   | Diaph1 | Dstn    | Ezr              | Fhbp11  | Fscn2            | Gsn      | Iqgap1 | Limk1  | Limk2 |
| E | Ulg1     | Macf1    | Map3k11  | Map4   | Map6    | Mapk13           | Mapre1  | Mapt             | Mark2    | Mid1   | Msn    | Myk   |
| F | Myk2     | Nck1     | Nck2     | Pak1   | Pak4    | LOC1009098<br>40 | Phldb2  | Ppp1r12a         | Ppp1r12b | Ppp3ca | Ppp3cb | Rac1  |
| G | Racgap1  | Rdx      | Rhoa     | Rock1  | Sh3f1   | Sh2              | Slmn1   | Tiam1            | Vasp     | Was    | Waf1   | Wasl  |
| H | Actb     | B2m      | Hprt1    | Ldha   | Rplp1   | RGDC             | QIC     | QIC              | QIC      | PPC    | PPC    | PPC   |

## Gene table: QuantiNova LNA PCR Focus Panel

| Position | Assay      | Name                 | Symbol       | Ensembl ID        | Description   |
|----------|------------|----------------------|--------------|-------------------|---|
| A01      | SBR1106457 | ENSRNOT00000006607.5 | Actr2        | ENSRNOG0000004959 | ARP2 actin related protein 2 homolog Source RGD Symbol Acc 1310826                      |
| A02      | SBR1199947 | ENSRNOT00000084552.1 | Actr3        | ENSRNOG0000003206 | ARP3 actin related protein 3 homolog Source RGD Symbol Acc 71024                        |
| A03      | SBR1096525 | ENSRNOT00000030037.5 | Arap1        | ENSRNOG0000019555 | ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1 Source RGD Symbol Acc 1310385 |
| A04      | SBR1161104 | ENSRNOT00000025159.4 | Arfp2        | ENSRNOG0000018440 | ADP-ribosylation factor interacting protein 2 Source RGD Symbol Acc 1303204             |
| A05      | SBR1190489 | ENSRNOT00000088378.1 | Arhgap5      | ENSRNOG0000004696 | Rho GTPase activating protein 5 Source RGD Symbol Acc 1308507                           |
| A06      | SBR1138007 | ENSRNOT00000007779.7 | Arhgdib      | ENSRNOG0000005809 | Rho GDP dissociation inhibitor beta Source RGD Symbol Acc 1305383                       |
| A07      | SBR1164742 | ENSRNOT00000065865.3 | Arhgef1      | ENSRNOG0000020130 | Rho guanine nucleotide exchange factor 1 Source RGD Symbol Acc 620951                   |
| A08      | SBR1133311 | ENSRNOT00000020717.7 | Arhgef11     | ENSRNOG0000015026 | Rho guanine nucleotide exchange factor 11 Source RGD Symbol Acc 619705                  |
| A09      | SBR1163614 | ENSRNOT00000001315.6 | Arpc1b       | ENSRNOG0000000991 | actin related protein 2/3 complex, subunit 1B Source RGD Symbol Acc 2155                |
| A10      | SBR1175774 | ENSRNOT00000019265.6 | Arpc2        | ENSRNOG0000014289 | actin related protein 2/3 complex, subunit 2 Source RGD Symbol Acc 1305848              |
| A11      | SBR1167557 | ENSRNOT00000011499.7 | Arpc3        | ENSRNOG0000008673 | actin related protein 2/3 complex, subunit 3 Source RGD Symbol Acc 1311985              |
| A12      | SBR1196493 | ENSRNOT00000011937.5 | Arpc4        | ENSRNOG0000008994 | actin related protein 2/3 complex, subunit 4 Source RGD Symbol Acc 1310096              |
| B01      | SBR1105796 | ENSRNOT00000092562.1 | Arpc5        | ENSRNOG0000028062 | actin related protein 2/3 complex, subunit 5 Source RGD Symbol Acc 1311791              |
| B02      | SBR1180416 | ENSRNOT00000055102.4 | Aurka        | ENSRNOG0000004479 | aurora kinase A Source RGD Symbol Acc 628895  |
| B03      | SBR1202691 | ENSRNOT00000008492.6 | Aurkb        | ENSRNOG0000005659 | aurora kinase B Source RGD Symbol Acc 621625  |
| B04      | SBR1130862 | ENSRNOT00000021245.7 | Aurkc        | ENSRNOG0000015825 | aurora kinase C Source RGD Symbol Acc 1309573   |
| B05      | SBR1169469 | ENSRNOT00000068437.4 | Baiap2       | ENSRNOG0000004049 | BAI1-associated protein 2 Source RGD Symbol Acc 619814                                  |
| B06      | SBR1164974 | ENSRNOT00000041264.3 | Cald1        | ENSRNOG0000010233 | caldesmon 1 Source RGD Symbol Acc 2256  |
| B07      | SBR1172458 | ENSRNOT00000064679.2 | Calm1        | ENSRNOG0000004060 | calmodulin 2 Source RGD Symbol Acc 2258   |
| B08      | SBR1130072 | ENSRNOT00000091382.1 | LOC100910506 | ENSRNOG0000060946 | calcium/calmodulin dependent serine protein kinase Source RGD Symbol Acc 62004          |
| B09      | SBR1129309 | ENSRNOT00000040002.4 | Ccna1        | ENSRNOG0000014052 | cyclin A1 Source RGD Symbol Acc 1310639   |
| B10      | SBR1142548 | ENSRNOT00000082846.1 | Ccnb1        | ENSRNOG0000058539 | cyclin B1 Source RGD Symbol Acc 2291  |
| B11      | SBR1198223 | ENSRNOT00000064392.1 | Ccnf         | ENSRNOG0000007483 | cyclin F Source RGD Symbol Acc 67401  |
| B12      | SBR1159831 | ENSRNOT00000029025.5 | Cdc42        | ENSRNOG0000013536 | cell division cycle 42 Source RGD Symbol Acc 71043                                      |
| C01      | SBR1113152 | ENSRNOT00000003837.3 | Cdc42bpa     | ENSRNOG0000002841 | CDC42 binding protein kinase alpha Source RGD Symbol Acc 621406                         |
| C02      | SBR1213635 | ENSRNOT00000028379.5 | Cdc42ep2     | ENSRNOG0000020904 | CDC42 effector protein 2 Source RGD Symbol Acc 1310253                                  |
| C03      | SBR1207648 | ENSRNOT00000048711.4 | Cdc42ep3     | ENSRNOG0000032136 | CDC42 effector protein 3 Source RGD Symbol Acc 1305858                                  |
| C04      | SBR1180282 | ENSRNOT00000011052.4 | Cdk5         | ENSRNOG0000008017 | cyclin-dependent kinase 5 Source RGD Symbol Acc 70514                                   |
| C05      | SBR1197371 | ENSRNOT00000031746.2 | Cdk5r1       | ENSRNOG0000021685 | cyclin-dependent kinase 5 regulatory subunit 1 Source RGD Symbol Acc 629472             |
| C06      | SBR1102451 | ENSRNOT00000015962.6 | Cfl1         | ENSRNOG0000020660 | cofilin 1 Source RGD Symbol Acc 69285   |
| C07      | SBR1172725 | ENSRNOT00000057036.2 | Cit          | ENSRNOG0000001143 | citron rho-interacting serine/threonine kinase Source RGD Symbol Acc 70878              |
| C08      | SBR1167376 | ENSRNOT00000092998.1 | Clasp1       | ENSRNOG0000002376 | cytoplasmic linker associated protein 1 Source RGD Symbol Acc 1310970                   |
| C09      | SBR1206690 | ENSRNOT00000091980.1 | Clasp2       | ENSRNOG0000009161 | cytoplasmic linker associated protein 2 Source RGD Symbol Acc 619789                    |
| C10      | SBR1167405 | ENSRNOT00000088002.1 | Clip1        | ENSRNOG0000001247 | CAP-GLY domain containing linker protein 1 Source RGD Symbol Acc 67404                  |
|          |            | ENSRNOT000000        |              | ENSRNOG00         |   |

| Position | Assay      | Name                 | Symbol       | Ensembl ID          | Description   |
|----------|------------|----------------------|--------------|---------------------|---|
| C11      | SBR1215437 | 033200.4             | Clip2        | 000021611           | CAP-GLY domain containing linker protein 2 Source RGD Symbol Acc 62019              |
| C12      | SBR1123117 | ENSRNOT0000006407.4  | Crk          | ENSRNOG0000025792   | CRK proto-oncogene, adaptor protein Source RGD Symbol Acc 2405                      |
| D01      | SBR1181436 | ENSRNOT00000054859.5 | Ctnn         | ENSRNOG00000047280  | cortactin Source RGD Symbol Acc 619839  |
| D02      | SBR1148408 | ENSRNOT00000088459.1 | Cyfp1        | ENSRNOG00000011945  | cytoplasmic FMR1 interacting protein 1 Source RGD Symbol Acc 1310332                |
| D03      | SBR1209936 | ENSRNOT00000059496.4 | Cyfp2        | ENSRNOG00000006557  | cytoplasmic FMR1 interacting protein 2 Source RGD Symbol Acc 1305048                |
| D04      | SBR1130473 | ENSRNOT00000060432.5 | Diaph1       | ENSRNOG00000019688  | diaphanous-related formin 1 Source RGD Symbol Acc 1310707                           |
| D05      | SBR1212912 | ENSRNOT0000007794.6  | Dstn         | ENSRNOG0000005924   | destrin, actin depolymerizing factor Source RGD Symbol Acc 1588366                  |
| D06      | SBR1212696 | ENSRNOT00000090033.1 | Ezr          | ENSRNOG00000018524  | ezrin Source RGD Symbol Acc 621161  |
| D07      | SBR1161393 | ENSRNOT00000055669.4 | Fnbp11       | ENSRNOG00000013798  | formin binding protein 1-like Source RGD Symbol Acc 1305386                         |
| D08      | SBR1098138 | ENSRNOT00000054975.2 | Fscn2        | ENSRNOG00000036700  | fascin actin-bundling protein 2, retinal Source RGD Symbol Acc 1308941              |
| D09      | SBR1159016 | ENSRNOT00000025857.5 | Gsn          | ENSRNOG00000018991  | gelsolin Source RGD Symbol Acc 1303089  |
| D10      | SBR1196460 | ENSRNOT00000018021.5 | Iqgap1       | ENSRNOG00000012002  | IQ motif containing GTPase activating protein 1 Source RGD Symbol Acc 1311884       |
| D11      | SBR1203801 | ENSRNOT00000084427.1 | Limk1        | ENSRNOG00000001470  | LIM domain kinase 1 Source RGD Symbol Acc 62055                                     |
| D12      | SBR1145734 | ENSRNOT00000057673.3 | Limk2        | ENSRNOG00000019000  | LIM domain kinase 2 Source RGD Symbol Acc 62056                                     |
| E01      | SBR1115243 | ENSRNOT00000005366.5 | Llg1         | ENSRNOG00000003948  | LLGL scribble cell polarity complex component 1 Source RGD Symbol Acc 3012          |
| E02      | SBR1097119 | ENSRNOT00000084109.1 | Macf1        | ENSRNOG00000016047  | microtubule-actin crosslinking factor 1 Source RGD Symbol Acc 1306057               |
| E03      | SBR1105433 | ENSRNOT00000028185.5 | Map3k11      | ENSRNOG00000020773  | mitogen-activated protein kinase kinase kinase 11 Source RGD Symbol Acc 1359261     |
| E04      | SBR1101363 | ENSRNOT00000056166.4 | Map4         | ENSRNOG00000020748  | microtubule-associated protein 4 Source RGD Symbol Acc 1564359                      |
| E05      | SBR1110941 | ENSRNOT00000034389.6 | Map6         | ENSRNOG00000027204  | microtubule-associated protein 6 Source RGD Symbol Acc 61804                        |
| E06      | SBR1146992 | ENSRNOT00000000621.6 | Mapk13       | ENSRNOG00000000515  | mitogen activated protein kinase 13 Source RGD Symbol Acc 3045                      |
| E07      | SBR1172341 | ENSRNOT00000016220.6 | Mapre1       | ENSRNOG00000011798  | microtubule-associated protein, RP/EB family, member 1 Source RGD Symbol Acc 621781 |
| E08      | SBR1202634 | ENSRNOT00000042984.5 | Mapt         | ENSRNOG00000005133  | microtubule-associated protein tau Source RGD Symbol Acc 69329                      |
| E09      | SBR1130509 | ENSRNOT00000091990.1 | Mark2        | ENSRNOG00000021184  | microtubule affinity regulating kinase 2 Source RGD Symbol Acc 708483               |
| E10      | SBR1148550 | ENSRNOT00000004873.6 | Mid1         | ENSRNOG00000003613  | midline 1 Source RGD Symbol Acc 2640  |
| E11      | SBR1151055 | ENSRNOT00000093499.1 | Msn          | ENSRNOG000000030118 | moesin Source RGD Symbol Acc 621260   |
| E12      | SBR1114881 | ENSRNOT00000085618.1 | Mylk         | ENSRNOG00000002215  | myosin light chain kinase Source RGD Symbol Acc 1310915                             |
| F01      | SBR1150149 | ENSRNOT00000011255.5 | Mylk2        | ENSRNOG00000008235  | myosin light chain kinase 2 Source RGD Symbol Acc 620934                            |
| F02      | SBR1146512 | ENSRNOT00000020330.7 | Nck1         | ENSRNOG00000014917  | NCK adaptor protein 1 Source RGD Symbol Acc 1310688                                 |
| F03      | SBR1165392 | ENSRNOT00000023029.7 | Nck2         | ENSRNOG00000017155  | NCK adaptor protein 2 Source RGD Symbol Acc 1305965                                 |
| F04      | SBR1158213 | ENSRNOT00000091952.1 | Pak1         | ENSRNOG00000029784  | p21 (RAC1) activated kinase 1 Source RGD Symbol Acc 3250                            |
| F05      | SBR1181658 | ENSRNOT00000026966.6 | Pak4         | ENSRNOG00000019883  | p21 (RAC1) activated kinase 4 Source RGD Symbol Acc 1307705                         |
| F06      | SBR1199493 | ENSRNOT00000023469.7 | LOC100909840 | ENSRNOG00000017427  | profilin-2-like Source RGD Symbol Acc 6501768                                       |
| F07      | SBR1188103 | ENSRNOT00000093201.1 | Phldb2       | ENSRNOG00000002171  | pleckstrin homology-like domain, family B, member 2 Source NCBI gene Acc 685611     |
| F08      | SBR1214171 | ENSRNOT00000006773.8 | Ppp1r12a     | ENSRNOG00000004925  | protein phosphatase 1, regulatory subunit 12A Source RGD Symbol Acc 620013          |
| F09      | SBR1104913 | ENSRNOT00000089068.1 | Ppp1r12b     | ENSRNOG00000051440  | protein phosphatase 1, regulatory subunit 12B Source RGD Symbol Acc 1309287         |
| F10      | SBR1162958 | ENSRNOT00000047975.5 | Ppp3ca       | ENSRNOG0000009882   | protein phosphatase 3 catalytic subunit alpha Source RGD Symbol Acc 3382            |

| Position | Assay      | Name                 | Symbol  | Ensembl ID        | Description   |
|----------|------------|----------------------|---------|-------------------|---|
| F11      | SBR1174177 | ENSRNOT00000082236.1 | PPP3cb  | ENSRNOG0000054782 | protein phosphatase 3 catalytic subunit beta Source RGD Symbol Acc 3383             |
| F12      | SBR1123146 | ENSRNOT00000001417.5 | Rac1    | ENSRNOG0000001068 | Rac family small GTPase 1 Source RGD Symbol Acc 619755                              |
| G01      | SBR1134556 | ENSRNOT00000071885.2 | Racgap1 | ENSRNOG0000049033 | Rac GTPase-activating protein 1 Source RGD Symbol Acc 1305912                       |
| G02      | SBR1193917 | ENSRNOT00000034924.5 | Rdx     | ENSRNOG0000012237 | radixin Source RGD Symbol Acc 1359472   |
| G03      | SBR1125110 | ENSRNOT00000071664.2 | Rhoa    | ENSRNOG0000050519 | ras homolog family member A Source RGD Symbol Acc 619921                            |
| G04      | SBR1199203 | ENSRNOT00000061777.5 | Rock1   | ENSRNOG0000031092 | Rho-associated coiled-coil containing protein kinase 1 Source RGD Symbol Acc 620424 |
| G05      | SBR1177386 | ENSRNOT00000013816.3 | Sh3rf1  | ENSRNOG0000010358 | SH3 domain containing ring finger 1 Source RGD Symbol Acc 735154                    |
| G06      | SBR1186229 | ENSRNOT00000019410.6 | Ssh2    | ENSRNOG0000014285 | slingshot protein phosphatase 2 Source RGD Symbol Acc 1309389                       |
| G07      | SBR1151756 | ENSRNOT00000022574.5 | Stmn1   | ENSRNOG0000016810 | stathmin 1 Source RGD Symbol Acc 2992   |
| G08      | SBR1095684 | ENSRNOT00000046486.5 | Tiam1   | ENSRNOG0000021569 | T-cell lymphoma invasion and metastasis 1 Source RGD Symbol Acc 1307455             |
| G09      | SBR1164630 | ENSRNOT00000022214.7 | Vasp    | ENSRNOG0000016367 | vasodilator-stimulated phosphoprotein Source RGD Symbol Acc 1311542                 |
| G10      | SBR1126078 | ENSRNOT00000073289.3 | Was     | ENSRNOG0000031058 | Wiskott-Aldrich syndrome Source RGD Symbol Acc 1563567                              |
| G11      | SBR1106427 | ENSRNOT00000073091.2 | Wasf1   | ENSRNOG0000047476 | WAS protein family, member 1 Source RGD Symbol Acc 1561954                          |
| G12      | SBR1162147 | ENSRNOT00000009261.6 | Wasl    | ENSRNOG0000006975 | Wiskott-Aldrich syndrome-like Source RGD Symbol Acc 735144                          |
| H01      | SBR1220567 | ENSRNOT00000042459.4 | Actb    | ENSRNOG0000034254 | actin, beta Source RGD Symbol Acc 628837  |
| H02      | SBR1220568 | ENSRNOT00000023017.5 | B2m     | ENSRNOG0000017123 | beta-2 microglobulin Source RGD Symbol Acc 2189                                     |
| H03      | SBR1225377 | ENSRNOT00000065935.3 | Hprt1   | ENSRNOG0000048561 | hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826                 |
| H04      | SBR1122313 | ENSRNOT00000017468.2 | Ldha    | ENSRNOG0000013009 | lactate dehydrogenase A Source RGD Symbol Acc 2996                                  |
| H05      | SBR1220572 | ENSRNOT00000018820.5 | Rplp1   | ENSRNOG0000013874 | ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774             |
| H06      | SBR1218555 | Sybr_RGDC            | RGDC    | Sybr_RGDC         | Rat 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 $\mu$ l reactions: 20 $\mu$ l 8x gDNA Removal Mix, 10 $\mu$ l Reverse Transcription Enzyme, 40 $\mu$ l Reverse Transcription Mix (containing RT primers), 20 $\mu$ l Internal Control RNA, 1.9 ml RNase-Free Water                                   | 205410   |
| QuantiNova SYBR Green RT-PCR Kit (100)*    | For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green RT Mix, 20 $\mu$ l Internal Control RNA, 500 $\mu$ l Yellow Template Dilution Buffer, 250 $\mu$ l ROX Reference Dye, 1.9 $\mu$ l RNase-Free Water | 208152   |
| QuantiNova SYBR Green PCR Kit (100)*       | For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ 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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