

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

## Rat Signal Transduction PathwayFinder™

Cat. no. 249955 UPRN-014ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

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

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA Probe PCR 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 | Acsl3 | Acsl4        | Acsl5    | Adm   | Arnt    | Aif4  | Axin2    | Bax     | Pmaip1 | Bcl2   | Bcl2a1  | Bcl2l1  |
| B | Birc3 | Bmp2         | Bmp4     | Blg2  | Car9    | Ccl5  | Ccnd1    | Ccnd2   | Cdkn1a | Cdkn1b | Cebpd   | Cpt2    |
| C | Csf1  | Dab2         | Egfr     | Emp1  | Epo     | Fabp1 | Fas      | Fcer2   | Fosl1  | Fth1   | Gadd45a | Gadd45b |
| D | Gata3 | Gclc         | Gclm     | Gsr   | Herpud1 | Hes1  | Hes5     | Hey1    | Hey2   | Heyl   | Hmox1   | Icam1   |
| E | Id1   | Ifng         | Ifrd1    | Irf1  | Jag1    | Pgk1  | Lfng     | Lrg1    | Crp    | Mmp7   | Myc     | Notch1  |
| F | Nqo1  | Olr1         | Pcna     | Ppard | Ptch1   | Rb1   | Serpine1 | Slc27a4 | Slc2a1 | Socs3  | Sorbs1  | Sqstm1  |
| G | Stat1 | LOC103694380 | Tnfrsf10 | Txn1  | Txnrd1  | Vegfa | Ccn4     | Wnt1    | Wnt2b  | Wnt3a  | Wnt5a   | Wnt6    |
| H | Actb  | B2m          | Hprt1    | Ldha  | Rplp1   | RGDC  | QIC      | QIC     | QIC    | PPC    | PPC     | PPC     |

## Gene table: QuantiNova LNA Probe PCR Focus Panel

| Position | Assay       | Name                 | Symbol | Ensembl ID         | Description                                                                     |
|----------|-------------|----------------------|--------|--------------------|---------------------------------------------------------------------------------|
| A01      | UPFR1023034 | ENSRNOT00000020161.2 | Acsl3  | ENSRNOG0000014718  | acyl-CoA synthetase long-chain family member 3 Source RGD Symbol Acc 70552      |
| A02      | UPFR1082627 | ENSRNOT00000026057.6 | Acsl4  | ENSRNOG0000019180  | acyl-CoA synthetase long-chain family member 4 Source RGD Symbol Acc 69401      |
| A03      | UPFR1034409 | ENSRNOT00000022126.6 | Acsl5  | ENSRNOG0000016265  | acyl-CoA synthetase long-chain family member 5 Source RGD Symbol Acc 69402      |
| A04      | UPFR1061154 | ENSRNOT00000036718.1 | Adm    | ENSRNOG0000027030  | adrenomedullin Source RGD Symbol Acc 2047                                       |
| A05      | UPFR1041304 | ENSRNOT00000044738.4 | Arnt   | ENSRNOG0000031174  | aryl hydrocarbon receptor nuclear translocator Source RGD Symbol Acc 2153       |
| A06      | UPFR1067882 | ENSRNOT00000065304.4 | Atf4   | ENSRNOG0000017801  | activating transcription factor 4 Source RGD Symbol Acc 621863                  |
| A07      | UPFR1102592 | ENSRNOT00000088599.1 | Axin2  | ENSRNOG0000055010  | axin 2 Source RGD Symbol Acc 69259                                              |
| A08      | UPFR1074536 | ENSRNOT00000028328.5 | Bax    | ENSRNOG0000020876  | BCL2 associated X, apoptosis regulator Source RGD Symbol Acc 2192               |
| A09      | UPFR1055085 | ENSRNOT00000025362.3 | Pmaip1 | ENSRNOG0000018770  | phorbol-12-myristate-13-acetate-induced protein 1 Source RGD Symbol Acc 1359266 |
| A10      | UPFR1082998 | ENSRNOT00000003768.2 | Bcl2   | ENSRNOG0000002791  | BCL2, apoptosis regulator Source RGD Symbol Acc 2199                            |
| A11      | UPFR1064713 | ENSRNOT00000039850.3 | Bcl2a1 | ENSRNOG0000047606  | BCL2-related protein A1 Source RGD Symbol Acc 620621                            |
| A12      | UPFR1047186 | ENSRNOT00000010762.7 | Bcl2l1 | ENSRNOG0000007946  | Bcl2-like 1 Source RGD Symbol Acc 2200                                          |
| B01      | UPFR1015683 | ENSRNOT00000007702.7 | Birc3  | ENSRNOG0000005731  | baculoviral IAP repeat-containing 3 Source RGD Symbol Acc 621282                |
| B02      | UPFR1023820 | ENSRNOT00000028904.4 | Bmp2   | ENSRNOG00000021276 | bone morphogenetic protein 2 Source RGD Symbol Acc 2211                         |
| B03      | UPFR1013450 | ENSRNOT00000083268.1 | Bmp4   | ENSRNOG0000009694  | bone morphogenetic protein 4 Source RGD Symbol Acc 2213                         |
| B04      | UPFR1061715 | ENSRNOT00000004408.3 | Btg2   | ENSRNOG0000003300  | BTG anti-proliferation factor 2 Source RGD Symbol Acc 2225                      |
| B05      | UPFR1102120 | ENSRNOT00000023060.5 | Car9   | ENSRNOG0000017073  | carbonic anhydrase 9 Source RGD Symbol Acc 1306426                              |
| B06      | UPFR1019085 | ENSRNOT00000014865.6 | Ccl5   | ENSRNOG0000010906  | C-C motif chemokine ligand 5 Source RGD Symbol Acc 69069                        |
| B07      | UPFR1042457 | ENSRNOT00000088588.1 | Ccnd1  | ENSRNOG0000020918  | cyclin D1 Source RGD Symbol Acc 68384                                           |
| B08      | UPFR1088052 | ENSRNOT00000086440.1 | Ccnd2  | ENSRNOG0000057710  | cyclin D2 Source RGD Symbol Acc 621083                                          |
| B09      | UPFR1028644 | ENSRNOT00000091731.1 | Cdkn1a | ENSRNOG0000000521  | cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328                |
| B10      | UPFR1069360 | ENSRNOT00000049848.1 | Cdkn1b | ENSRNOG0000007249  | cyclin-dependent kinase inhibitor 1B Source RGD Symbol Acc 69062                |
| B11      | UPFR1073105 | ENSRNOT00000074586.2 | Cebpd  | ENSRNOG0000050869  | CCAAT/enhancer binding protein delta Source RGD Symbol Acc 2328                 |
| B12      | UPFR1106957 | ENSRNOT00000016954.3 | Cpt2   | ENSRNOG0000012443  | carnitine palmitoyltransferase 2 Source RGD Symbol Acc 2398                     |
| C01      | UPFR1022984 | ENSRNOT00000081835.1 | Csf1   | ENSRNOG0000018659  | colony stimulating factor 1 Source RGD Symbol Acc 621063                        |
| C02      | UPFR1110844 | ENSRNOT00000050655.5 | Dab2   | ENSRNOG0000028930  | DAB2, clathrin adaptor protein Source RGD Symbol Acc 621007                     |
| C03      | UPFR1091984 | ENSRNOT00000006087.2 | Egfr   | ENSRNOG0000004332  | epidermal growth factor receptor Source RGD Symbol Acc 2543                     |
| C04      | UPFR1029298 | ENSRNOT00000079785.1 | Emp1   | ENSRNOG0000008676  | epithelial membrane protein 1 Source RGD Symbol Acc 2552                        |
| C05      | UPFR1023629 | ENSRNOT00000001914.4 | Epo    | ENSRNOG0000001412  | erythropoietin Source RGD Symbol Acc 2559                                       |
| C06      | UPFR1068726 | ENSRNOT00000008840.5 | Fabp1  | ENSRNOG0000006675  | fatty acid binding protein 1 Source RGD Symbol Acc 2590                         |
| C07      | UPFR1075141 | ENSRNOT00000025928.5 | Fas    | ENSRNOG0000019142  | Fas cell surface death receptor Source RGD Symbol Acc 619831                    |
| C08      | UPFR1096454 | ENSRNOT00000001333.4 | Fcer2  | ENSRNOG0000001005  | Fc fragment of IgE receptor II Source RGD Symbol Acc 619997                     |
| C09      | UPFR1040543 | ENSRNOT00000027891.2 | Fosl1  | ENSRNOG0000020552  | FOS like 1, AP-1 transcription factor subunit Source RGD Symbol Acc 2627        |
| C10      | UPFR1072612 | ENSRNOT00000030919.5 | Fth1   | ENSRNOG0000022619  | ferritin heavy chain 1 Source RGD Symbol Acc 2635                               |
|          |             | ENSRNOT000000        |        | ENSRNOG00          |                                                                                 |

| Position | Assay       | Name                  | Symbol   | Ensembl ID        | Description                                                                                     |
|----------|-------------|-----------------------|----------|-------------------|-------------------------------------------------------------------------------------------------|
| C11      | UPFR1092990 | 007698.6              | Gadd45a  | 000005615         | growth arrest and DNA-damage-inducible, alpha Source RGD Symbol Acc 2654                        |
| C12      | UPFR1054309 | ENSRNOT00000026871.4  | Gadd45b  | ENSRNOG0000019822 | growth arrest and DNA-damage-inducible, beta Source RGD Symbol Acc 1309080                      |
| D01      | UPFR1027517 | ENSRNOT00000026187.5  | Gata3    | ENSRNOG0000019336 | GATA binding protein 3 Source RGD Symbol Acc 621250                                             |
| D02      | UPFR1065988 | ENSRNOT00000033196.3  | Gclc     | ENSRNOG0000006302 | glutamate-cysteine ligase, catalytic subunit Source RGD Symbol Acc 619868                       |
| D03      | UPFR1071868 | ENSRNOT00000018343.4  | Gclm     | ENSRNOG0000013409 | glutamate cysteine ligase, modifier subunit Source RGD Symbol Acc 619871                        |
| D04      | UPFR1080300 | ENSRNOT00000090036.1  | Gsr      | ENSRNOG0000014915 | glutathione-disulfide reductase Source RGD Symbol Acc 621747                                    |
| D05      | UPFR1015276 | ENSRNOT00000025559.5  | Herpud1  | ENSRNOG0000018796 | homocysteine inducible ER protein with ubiquitin like domain 1 Source RGD Symbol Acc 620818     |
| D06      | UPFR1076214 | ENSRNOT00000002346.7  | Hes1     | ENSRNOG0000001720 | hes family bHLH transcription factor 1 Source RGD Symbol Acc 62081                              |
| D07      | UPFR1126554 | ENSRNOT00000018769.2  | Hes5     | ENSRNOG0000013850 | hes family bHLH transcription factor 5 Source RGD Symbol Acc 621340                             |
| D08      | UPFR1104855 | ENSRNOT00000015537.7  | Hey1     | ENSRNOG0000011593 | hes-related family bHLH transcription factor with YRPW motif 1 Source NCBI gene Acc 155437      |
| D09      | UPFR1069377 | ENSRNOT00000018718.6  | Hey2     | ENSRNOG0000013364 | hes-related family bHLH transcription factor with YRPW motif 2 Source RGD Symbol Acc 621405     |
| D10      | UPFR1097117 | ENSRNOT00000020929.3  | Heyl     | ENSRNOG0000015318 | hes-related family bHLH transcription factor with YRPW motif-like Source RGD Symbol Acc 1305022 |
| D11      | UPFR1040868 | ENSRNOT00000019192.6  | Hmox1    | ENSRNOG0000014117 | heme oxygenase 1 Source RGD Symbol Acc 2806                                                     |
| D12      | UPFR1031281 | ENSRNOT00000028066.5  | Icam1    | ENSRNOG0000020679 | intercellular adhesion molecule 1 Source RGD Symbol Acc 2857                                    |
| E01      | UPFR1039525 | ENSRNOT00000029660.5  | Id1      | ENSRNOG0000021750 | inhibitor of DNA binding 1, HLH protein Source RGD Symbol Acc 2858                              |
| E02      | UPFR1084134 | ENSRNOT000000009919.2 | Ifng     | ENSRNOG0000007468 | interferon gamma Source RGD Symbol Acc 2866                                                     |
| E03      | UPFR1048152 | ENSRNOT00000073910.1  | Ifrd1    | ENSRNOG0000050997 | interferon-related developmental regulator 1 Source RGD Symbol Acc 2867                         |
| E04      | UPFR1043289 | ENSRNOT00000010968.6  | Irf1     | ENSRNOG0000008144 | interferon regulatory factor 1 Source RGD Symbol Acc 2920                                       |
| E05      | UPFR1082062 | ENSRNOT00000010638.7  | Jag1     | ENSRNOG0000007443 | jagged 1 Source RGD Symbol Acc 2937                                                             |
| E06      | UPFR1132956 | ENSRNOT00000077604.1  | Pgk1     | ENSRNOG0000058249 | phosphoglycerate kinase 1 Source RGD Symbol Acc 619878                                          |
| E07      | UPFR1022297 | ENSRNOT00000001682.6  | Lfng     | ENSRNOG0000001250 | LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase Source RGD Symbol Acc 620587       |
| E08      | UPFR1037204 | ENSRNOT00000074993.2  | Lrg1     | ENSRNOG0000049918 | leucine-rich alpha-2-glycoprotein 1 Source RGD Symbol Acc 1359464                               |
| E09      | UPFR1072132 | ENSRNOT00000000058.6  | Crp      | ENSRNOG0000000053 | C-reactive protein Source RGD Symbol Acc 2411                                                   |
| E10      | UPFR1034539 | ENSRNOT00000014041.5  | Mmp7     | ENSRNOG0000010507 | matrix metalloproteinase 7 Source RGD Symbol Acc 3100                                           |
| E11      | UPFR1101439 | ENSRNOT000000006188.5 | Myc      | ENSRNOG0000004500 | MYC proto-oncogene, bHLH transcription factor Source RGD Symbol Acc 3130                        |
| E12      | UPFR1044597 | ENSRNOT00000026212.7  | Notch1   | ENSRNOG0000019322 | notch 1 Source RGD Symbol Acc 3187                                                              |
| F01      | UPFR1111217 | ENSRNOT00000017174.5  | Nqo1     | ENSRNOG0000012772 | NAD(P)H quinone dehydrogenase 1 Source RGD Symbol Acc 2503                                      |
| F02      | UPFR1028876 | ENSRNOT000000086390.1 | Olr1     | ENSRNOG0000056219 | oxidized low density lipoprotein receptor 1 Source RGD Symbol Acc 620515                        |
| F03      | UPFR1093185 | ENSRNOT00000028887.6  | Pcna     | ENSRNOG0000021264 | proliferating cell nuclear antigen Source RGD Symbol Acc 3269                                   |
| F04      | UPFR1082868 | ENSRNOT00000042539.5  | Ppard    | ENSRNOG0000000503 | peroxisome proliferator-activated receptor delta Source RGD Symbol Acc 3370                     |
| F05      | UPFR1054272 | ENSRNOT000000086130.1 | Ptch1    | ENSRNOG0000019354 | patched 1 Source RGD Symbol Acc 621425                                                          |
| F06      | UPFR1039430 | ENSRNOT00000021752.5  | Rb1      | ENSRNOG0000016029 | RB transcriptional corepressor 1 Source RGD Symbol Acc 3540                                     |
| F07      | UPFR1051798 | ENSRNOT00000001916.2  | Serpine1 | ENSRNOG0000001414 | serpin family E member 1 Source RGD Symbol Acc 3249                                             |
| F08      | UPFR1026149 | ENSRNOT00000019500.6  | Slc27a4  | ENSRNOG0000014369 | solute carrier family 27 member 4 Source RGD Symbol Acc 1307383                                 |
| F09      | UPFR1052096 | ENSRNOT000000083700.1 | Slc2a1   | ENSRNOG0000007284 | solute carrier family 2 member 1 Source RGD Symbol Acc 3704                                     |
| F10      | UPFR1069728 | ENSRNOT000000003940.3 | Socs3    | ENSRNOG0000002946 | suppressor of cytokine signaling 3 Source RGD Symbol Acc 621087                                 |

| Position | Assay       | Name                 | Symbol       | Ensembl ID         | Description                                                                      |
|----------|-------------|----------------------|--------------|--------------------|----------------------------------------------------------------------------------|
| F11      | UPFR1049169 | ENSRNOT00000021114.8 | Sorbs1       | ENSRNOG00000015658 | sorbin and SH3 domain containing 1 Source RGD Symbol Acc 1586598                 |
| F12      | UPFR1112424 | ENSRNOT00000059255.5 | Sqstm1       | ENSRNOG00000003147 | sequestosome 1 Source RGD Symbol Acc 69287                                       |
| G01      | UPFR1068760 | ENSRNOT00000083514.1 | Stat1        | ENSRNOG00000014079 | signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747 |
| G02      | UPFR1098022 | ENSRNOT00000079677.1 | LOC103694380 | ENSRNOG00000055156 | tumor necrosis factor-like Source RGD Symbol Acc 9404643                         |
| G03      | UPFR1107113 | ENSRNOT00000017758.5 | Tnfsf10      | ENSRNOG00000013269 | TNF superfamily member 10 Source RGD Symbol Acc 628734                           |
| G04      | UPFR1060469 | ENSRNOT00000016447.6 | Txn1         | ENSRNOG00000012081 | thioredoxin 1 Source RGD Symbol Acc 621157                                       |
| G05      | UPFR1022916 | ENSRNOT00000013613.7 | Txnrd1       | ENSRNOG0000009088  | thioredoxin reductase 1 Source RGD Symbol Acc 61959                              |
| G06      | UPFR1117908 | ENSRNOT00000026559.5 | Vegfa        | ENSRNOG00000019598 | vascular endothelial growth factor A Source RGD Symbol Acc 619991                |
| G07      | UPFR1109359 | ENSRNOT00000009673.7 | Ccn4         | ENSRNOG00000007078 | cellular communication network factor 4 Source RGD Symbol Acc 69431              |
| G08      | UPFR1120741 | ENSRNOT00000090156.1 | Wnt1         | ENSRNOG00000061818 | Wnt family member 1 Source RGD Symbol Acc 1597195                                |
| G09      | UPFR1054052 | ENSRNOT00000019349.4 | Wnt2b        | ENSRNOG00000014385 | Wnt family member 2B Source RGD Symbol Acc 69346                                 |
| G10      | UPFR1043063 | ENSRNOT00000064505.3 | Wnt3a        | ENSRNOG00000003039 | Wnt family member 3A Source RGD Symbol Acc 1308057                               |
| G11      | UPFR1100946 | ENSRNOT00000021164.3 | Wnt5a        | ENSRNOG00000015618 | Wnt family member 5A Source RGD Symbol Acc 69250                                 |
| G12      | UPFR1019852 | ENSRNOT00000023439.6 | Wnt6         | ENSRNOG00000017409 | Wnt family member 6 Source RGD Symbol Acc 1304559                                |
| H01      | UPFR1132952 | ENSRNOT00000080216.1 | Actb         | ENSRNOG00000034254 | actin, beta Source RGD Symbol Acc 628837                                         |
| H02      | UPFR1132953 | ENSRNOT00000023017.5 | B2m          | ENSRNOG00000017123 | beta-2 microglobulin Source RGD Symbol Acc 2189                                  |
| H03      | UPFR1132959 | ENSRNOT00000065935.3 | Hprt1        | ENSRNOG00000048561 | hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826              |
| H04      | UPFR1018740 | ENSRNOT00000017468.2 | Ldha         | ENSRNOG00000013009 | lactate dehydrogenase A Source RGD Symbol Acc 2996                               |
| H05      | UPFR1132958 | ENSRNOT00000018820.5 | Rplp1        | ENSRNOG00000013874 | ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774          |
| H06      | UPFR1126610 | UPL_RGDC             | RGDC         | UPL_RGDC           | Rat Genomic DNA Contamination                                                    |
| H07      | UPFH1126606 | UPL_QIC              | QIC          | UPL_QIC            | QuantiNova Internal Control                                                      |
| H08      | UPFH1126606 | UPL_QIC              | QIC          | UPL_QIC            | QuantiNova Internal Control                                                      |
| H09      | UPFH1126606 | UPL_QIC              | QIC          | UPL_QIC            | QuantiNova Internal Control                                                      |
| H10      | UPFH1126605 | UPL_PPC              | PPC          | UPL_PPC            | Positive PCR Control                                                             |
| H11      | UPFH1126605 | UPL_PPC              | PPC          | UPL_PPC            | Positive PCR Control                                                             |
| H12      | UPFH1126605 | UPL_PPC              | PPC          | UPL_PPC            | Positive PCR Control                                                             |



## Related products

| Product                                    | Contents                                                                                                                                                                                                                                               | Cat. no. |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| QuantiNova LNA Probe PCR QC Panel          | These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats                                                         | 249945   |
| 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 Probe RT-PCR Kit (100)*         | For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe 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 | 208352   |
| QuantiNova Probe PCR Kit (100)*            | For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water                                                                        | 208252   |

\*Larger kit sizes available.

The QuantiNova LNA Probe 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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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