

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

## Rat Angiogenic Growth Factors

Cat. no. 249955 UPRN-072ZA

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 | Adamts1 | Aggf1 | Amot   | Angpt1  | Angpt2   | Angptl1  | Angptl3          | Angptl4 | AABR0705842<br>2.1 | Blg1  | Cd55  | Cd59             |
| B | Cga     | Chga  | Cited1 | Col18a1 | Col4a3   | Crhr2    | Csf3             | Cxcl10  | Cxcl2              | Cxcl6 | Cxcl9 | Egfl7            |
| C | Erap1   | Erbf2 | Ereg   | Fgf1    | Fgf2     | Fn1      | Foxm1            | Foxo4   | Fst                | Glimn | Grn   | Hey1             |
| D | Hey2    | Hgf   | Hpse   | Ifna5   | Ifnb1    | Ifng     | Il12a            | Il12b   | Kdr                | Lep   | Rnh1  | Mdk              |
| E | Myocd   | Ntrk2 | Pdgfb  | Pf4     | Pgf      | Plg      | Pbp              | Pr1     | Pr17d1             | Pln   | Plprj | LOC1083481<br>75 |
| F | Rasa1   | Rhob  | Rnase4 | Runx1   | Serpinc1 | Serpine1 | Serpinf1         | Shh     | Smo                | Tdgf1 | Tgfa  | Tgfb1            |
| G | Thbs1   | Tie1  | Timp1  | Timp2   | Timp3    | Timp4    | LOC1036943<br>80 | Tnni2   | Tnni3              | Vegfa | Wars2 | Wt1              |
| 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      | UPFR1105539 | ENSRNOT00000002187.7 | Adams1         | ENSRNOG0000001607  | ADAM metalloproteinase with thrombospondin type 1 motif, 1 Source RGD Symbol Acc 621241                      |
| A02      | UPFR1091402 | ENSRNOT00000051653.5 | Aggf1          | ENSRNOG00000029304 | angiogenic factor with G patch and FHA domains 1 Source RGD Symbol Acc 1310888                               |
| A03      | UPFR1098123 | ENSRNOT00000049482.4 | Amot           | ENSRNOG00000007345 | angiominin Source RGD Symbol Acc 1564027                                                                     |
| A04      | UPFR1072829 | ENSRNOT00000007979.6 | Angpt1         | ENSRNOG0000005854  | angiopoietin 1 Source RGD Symbol Acc 628896                                                                  |
| A05      | UPFR1036335 | ENSRNOT00000022774.6 | Angpt2         | ENSRNOG0000016696  | angiopoietin 2 Source RGD Symbol Acc 621861                                                                  |
| A06      | UPFR1039748 | ENSRNOT00000079152.1 | Angptl1        | ENSRNOG0000004712  | angiopoietin-like 1 Source RGD Symbol Acc 1598128                                                            |
| A07      | UPFR1043616 | ENSRNOT00000011486.6 | Angptl3        | ENSRNOG0000008638  | angiopoietin-like 3 Source RGD Symbol Acc 1564505                                                            |
| A08      | UPFR1032714 | ENSRNOT00000010031.6 | Angptl4        | ENSRNOG0000007545  | angiopoietin-like 4 Source RGD Symbol Acc 735058                                                             |
| A09      | UPFR1031474 | ENSRNOT00000076127.2 | AABR07058422.1 | ENSRNOG00000029450 |                                                                                                              |
| A10      | UPFR1118162 | ENSRNOT00000005910.4 | Btg1           | ENSRNOG0000004284  | BTG anti-proliferation factor 1 Source RGD Symbol Acc 2224                                                   |
| A11      | UPFR1055916 | ENSRNOT00000005284.6 | Cd55           | ENSRNOG0000003927  | CD55 molecule Source RGD Symbol Acc 620651                                                                   |
| A12      | UPFR1077772 | ENSRNOT00000067085.3 | Cd59           | ENSRNOG00000042821 | CD59 molecule Source RGD Symbol Acc 2311                                                                     |
| B01      | UPFR1075839 | ENSRNOT00000012385.4 | Cga            | ENSRNOG0000009269  | glycoprotein hormones, alpha polypeptide Source RGD Symbol Acc 620436                                        |
| B02      | UPFR1099988 | ENSRNOT00000090857.1 | Chga           | ENSRNOG00000052549 | chromogranin A Source RGD Symbol Acc 2338                                                                    |
| B03      | UPFR1068859 | ENSRNOT00000077678.1 | Cited1         | ENSRNOG0000003189  | Cbp/p300-interacting transactivator with Glu/Asp-rich carboxy-terminal domain 1 Source RGD Symbol Acc 620781 |
| B04      | UPFR1110277 | ENSRNOT00000045315.4 | Col18a1        | ENSRNOG0000001229  | collagen type XVIII alpha 1 chain Source RGD Symbol Acc 70936                                                |
| B05      | UPFR1065434 | ENSRNOT00000020669.5 | Col4a3         | ENSRNOG0000015365  | collagen type IV alpha 3 chain Source RGD Symbol Acc 71085                                                   |
| B06      | UPFR1060931 | ENSRNOT00000033672.3 | Crh2           | ENSRNOG0000011145  | corticotropin releasing hormone receptor 2 Source RGD Symbol Acc 70547                                       |
| B07      | UPFR1037448 | ENSRNOT00000011509.3 | Csf3           | ENSRNOG0000008525  | colony stimulating factor 3 Source RGD Symbol Acc 2426                                                       |
| B08      | UPFR1049597 | ENSRNOT00000003075.7 | Cxcl10         | ENSRNOG0000002256  | C-X-C motif chemokine ligand 10 Source RGD Symbol Acc 620209                                                 |
| B09      | UPFR1121790 | ENSRNOT00000003745.6 | Cxcl2          | ENSRNOG00000002792 | C-X-C motif chemokine ligand 2 Source RGD Symbol Acc 70069                                                   |
| B10      | UPFR1109014 | ENSRNOT00000003823.3 | Cxcl6          | ENSRNOG00000002843 | C-X-C motif chemokine ligand 6 Source RGD Symbol Acc 708540                                                  |
| B11      | UPFR1089821 | ENSRNOT00000003082.7 | Cxcl9          | ENSRNOG0000002242  | C-X-C motif chemokine ligand 9 Source RGD Symbol Acc 628798                                                  |
| B12      | UPFR1045272 | ENSRNOT00000026318.6 | Egfl7          | ENSRNOG0000019388  | EGF-like-domain, multiple 7 Source RGD Symbol Acc 708507                                                     |
| C01      | UPFR1059537 | ENSRNOT00000080222.1 | Erap1          | ENSRNOG0000009997  | endoplasmic reticulum aminopeptidase 1 Source RGD Symbol Acc 708542                                          |
| C02      | UPFR1024636 | ENSRNOT00000009114.7 | ErbB2          | ENSRNOG0000006450  | erb-b2 receptor tyrosine kinase 2 Source RGD Symbol Acc 2561                                                 |
| C03      | UPFR1109356 | ENSRNOT00000003716.3 | Ereg           | ENSRNOG00000002771 | epiregulin Source RGD Symbol Acc 620299                                                                      |
| C04      | UPFR1031298 | ENSRNOT00000018577.3 | Fgf1           | ENSRNOG0000013867  | fibroblast growth factor 1 Source RGD Symbol Acc 2605                                                        |
| C05      | UPFR1033121 | ENSRNOT00000023388.5 | Fgf2           | ENSRNOG0000017392  | fibroblast growth factor 2 Source RGD Symbol Acc 2609                                                        |
| C06      | UPFR1089380 | ENSRNOT00000057585.4 | Fn1            | ENSRNOG0000014288  | fibronectin 1 Source RGD Symbol Acc 2624                                                                     |
| C07      | UPFR1062968 | ENSRNOT00000008003.5 | Foxm1          | ENSRNOG0000005936  | forkhead box M1 Source RGD Symbol Acc 61807                                                                  |
| C08      | UPFR1059092 | ENSRNOT00000048521.3 | Foxo4          | ENSRNOG0000003316  | forkhead box O4 Source RGD Symbol Acc 1561201                                                                |
| C09      | UPFR1120134 | ENSRNOT00000015680.4 | Fst            | ENSRNOG0000011631  | follicle-stimulating hormone Source RGD Symbol Acc 2633                                                      |
| C10      | UPFR1078119 | ENSRNOT00000061583.3 | Glmn           | ENSRNOG0000002054  | glomulin, FKBP associated protein Source RGD Symbol Acc 1588600                                              |
|          |             | ENSRNOT000000        |                | ENSRNOG00          |                                                                                                              |

| Position | Assay       | Name                 | Symbol       | Ensembl ID        | Description                                                                                 |
|----------|-------------|----------------------|--------------|-------------------|---------------------------------------------------------------------------------------------|
| C11      | UPFR1096719 | 028557.7             | Grn          | 000021031         | granulin precursor Source RGD Symbol Acc 61983                                              |
| C12      | UPFR1104855 | ENSRNOT00000015537.7 | Hey1         | ENSRNOG0000011593 | hes-related family bHLH transcription factor with YRPW motif 1 Source NCBI gene Acc 155437  |
| D01      | UPFR1069377 | ENSRNOT00000018718.6 | Hey2         | ENSRNOG0000013364 | hes-related family bHLH transcription factor with YRPW motif 2 Source RGD Symbol Acc 621405 |
| D02      | UPFR1076642 | ENSRNOT00000009763.5 | Hgf          | ENSRNOG0000007027 | hepatocyte growth factor Source RGD Symbol Acc 2794                                         |
| D03      | UPFR1015590 | ENSRNOT00000002983.7 | Hpse         | ENSRNOG0000002188 | heparanase Source RGD Symbol Acc 61969                                                      |
| D04      | UPFR1014391 | ENSRNOT00000049705.1 | Ifna5        | ENSRNOG0000031046 | interferon, alpha 5 Source RGD Symbol Acc 1359312                                           |
| D05      | UPFR1098156 | ENSRNOT00000008224.2 | Ifnb1        | ENSRNOG0000006268 | interferon beta 1 Source RGD Symbol Acc 2865                                                |
| D06      | UPFR1084134 | ENSRNOT00000009919.2 | Ifng         | ENSRNOG0000007468 | interferon gamma Source RGD Symbol Acc 2866                                                 |
| D07      | UPFR1065603 | ENSRNOT00000012831.3 | Il12a        | ENSRNOG0000009468 | interleukin 12A Source RGD Symbol Acc 620562                                                |
| D08      | UPFR1060283 | ENSRNOT00000005898.6 | Il12b        | ENSRNOG0000004380 | interleukin 12B Source RGD Symbol Acc 628704                                                |
| D09      | UPFR1041145 | ENSRNOT00000085089.1 | Kdr          | ENSRNOG0000046829 | kinase insert domain receptor Source RGD Symbol Acc 2965                                    |
| D10      | UPFR1089630 | ENSRNOT00000071926.1 | Lep          | ENSRNOG0000045797 | leptin Source RGD Symbol Acc 3000                                                           |
| D11      | UPFR1035942 | ENSRNOT00000022241.5 | Rnh1         | ENSRNOG0000016416 | ribonuclease/angiogenin inhibitor 1 Source RGD Symbol Acc 621398                            |
| D12      | UPFR1113183 | ENSRNOT00000033978.3 | Mdk          | ENSRNOG0000017560 | midkine Source RGD Symbol Acc 69073                                                         |
| E01      | UPFR1083468 | ENSRNOT00000078675.1 | Myocd        | ENSRNOG0000003669 | myocardin Source RGD Symbol Acc 631347                                                      |
| E02      | UPFR1075665 | ENSRNOT00000042145.2 | Ntrk2        | ENSRNOG0000018839 | neurotrophic receptor tyrosine kinase 2 Source RGD Symbol Acc 3213                          |
| E03      | UPFR1088903 | ENSRNOT00000023196.5 | Pdgfb        | ENSRNOG0000017197 | platelet derived growth factor subunit B Source RGD Symbol Acc 3283                         |
| E04      | UPFR1099077 | ENSRNOT00000033406.1 | Pf4          | ENSRNOG0000028015 | platelet factor 4 Source RGD Symbol Acc 3305                                                |
| E05      | UPFR1118244 | ENSRNOT00000007790.5 | Pgf          | ENSRNOG0000005650 | placental growth factor Source RGD Symbol Acc 619850                                        |
| E06      | UPFR1070729 | ENSRNOT00000023368.5 | Plg          | ENSRNOG0000017223 | plasminogen Source RGD Symbol Acc 619893                                                    |
| E07      | UPFR1100499 | ENSRNOT00000003794.3 | Ppbp         | ENSRNOG0000002829 | pro-platelet basic protein Source RGD Symbol Acc 70548                                      |
| E08      | UPFR1015066 | ENSRNOT00000023412.4 | Prl          | ENSRNOG0000017374 | prolactin Source RGD Symbol Acc 3403                                                        |
| E09      | UPFR1101491 | ENSRNOT00000022251.6 | Prl7d1       | ENSRNOG0000016510 | prolactin family 7, subfamily d, member 1 Source RGD Symbol Acc 621307                      |
| E10      | UPFR1108673 | ENSRNOT00000016088.6 | Ptn          | ENSRNOG0000011946 | pleiotrophin Source RGD Symbol Acc 3444                                                     |
| E11      | UPFR1061998 | ENSRNOT00000049832.5 | Ptprj        | ENSRNOG0000034025 | protein tyrosine phosphatase, receptor type, J Source RGD Symbol Acc 3454                   |
| E12      | UPFR1113712 | ENSRNOT00000086441.1 | LOC108348175 | ENSRNOG0000048297 | protein quaking-like Source RGD Symbol Acc 11514364                                         |
| F01      | UPFR1085068 | ENSRNOT00000046251.2 | Rasa1        | ENSRNOG0000029185 | RAS p21 protein activator 1 Source RGD Symbol Acc 3537                                      |
| F02      | UPFR1064942 | ENSRNOT00000008008.3 | Rhob         | ENSRNOG0000021403 | ras homolog family member B Source RGD Symbol Acc 621309                                    |
| F03      | UPFR1065571 | ENSRNOT00000090272.1 | Rnase4       | ENSRNOG0000025625 | ribonuclease A family member 4 Source RGD Symbol Acc 61823                                  |
| F04      | UPFR1113082 | ENSRNOT00000002313.4 | Runx1        | ENSRNOG0000001704 | runt-related transcription factor 1 Source RGD Symbol Acc 2283                              |
| F05      | UPFR1060373 | ENSRNOT00000046512.4 | Serpinc1     | ENSRNOG0000002783 | serpin family C member 1 Source RGD Symbol Acc 1307404                                      |
| F06      | UPFR1051798 | ENSRNOT00000001916.2 | Serpine1     | ENSRNOG0000001414 | serpin family E member 1 Source RGD Symbol Acc 3249                                         |
| F07      | UPFR1094992 | ENSRNOT00000004313.5 | Serpinf1     | ENSRNOG0000003172 | serpin family F member 1 Source RGD Symbol Acc 631369                                       |
| F08      | UPFR1066763 | ENSRNOT00000008497.2 | Shh          | ENSRNOG0000006120 | sonic hedgehog signaling molecule Source RGD Symbol Acc 3673                                |
| F09      | UPFR1032074 | ENSRNOT00000080223.1 | Smo          | ENSRNOG0000008332 | smoothened, frizzled class receptor Source RGD Symbol Acc 3726                              |
| F10      | UPFR1115000 | ENSRNOT00000040840.5 | Tdgf1        | ENSRNOG0000037171 | teratocarcinoma-derived growth factor 1 Source RGD Symbol Acc 1594185                       |
|          |             |                      |              |                   |                                                                                             |

| Position | Assay       | Name                 | Symbol       | Ensembl ID         | Description                                                                                  |
|----------|-------------|----------------------|--------------|--------------------|----------------------------------------------------------------------------------------------|
| F11      | UPFR1060818 | ENSRNOT00000057441.4 | Tgfa         | ENSRNOG00000016182 | transforming growth factor alpha Source RGD Symbol Acc 3849                                  |
| F12      | UPFR1103881 | ENSRNOT00000028051.4 | Tgfb1        | ENSRNOG00000020652 | transforming growth factor, beta 1 Source RGD Symbol Acc 69051                               |
| G01      | UPFR1104745 | ENSRNOT00000083351.1 | Thbs1        | ENSRNOG00000045829 | thrombospondin 1 Source RGD Symbol Acc 1588455                                               |
| G02      | UPFR1020058 | ENSRNOT00000093097.1 | Tie1         | ENSRNOG00000020173 | tyrosine kinase with immunoglobulin-like and EGF-like domains 1 Source RGD Symbol Acc 621642 |
| G03      | UPFR1060230 | ENSRNOT00000013745.7 | Timp1        | ENSRNOG00000010208 | TIMP metalloproteinase inhibitor 1 Source RGD Symbol Acc 621675                              |
| G04      | UPFR1066754 | ENSRNOT00000004290.4 | Timp2        | ENSRNOG00000003148 | TIMP metalloproteinase inhibitor 2 Source RGD Symbol Acc 61312                               |
| G05      | UPFR1107259 | ENSRNOT00000005746.5 | Timp3        | ENSRNOG00000004303 | TIMP metalloproteinase inhibitor 3 Source RGD Symbol Acc 3865                                |
| G06      | UPFR1069231 | ENSRNOT00000010748.3 | Timp4        | ENSRNOG00000007955 | TIMP metalloproteinase inhibitor 4 Source RGD Symbol Acc 69077                               |
| G07      | UPFR1098022 | ENSRNOT00000079677.1 | LOC103694380 | ENSRNOG00000055156 | tumor necrosis factor-like Source RGD Symbol Acc 9404643                                     |
| G08      | UPFR1065784 | ENSRNOT00000076140.2 | Tnni2        | ENSRNOG00000020276 | troponin I2, fast skeletal type Source RGD Symbol Acc 62050                                  |
| G09      | UPFR1100364 | ENSRNOT00000024640.5 | Tnni3        | ENSRNOG00000018250 | troponin I3, cardiac type Source RGD Symbol Acc 62052                                        |
| G10      | UPFR1117908 | ENSRNOT00000026559.5 | Vegfa        | ENSRNOG00000019598 | vascular endothelial growth factor A Source RGD Symbol Acc 619991                            |
| G11      | UPFR1030939 | ENSRNOT00000026458.6 | Wars2        | ENSRNOG00000019508 | tryptophanyl tRNA synthetase 2 (mitochondrial) Source RGD Symbol Acc 1593417                 |
| G12      | UPFR1027373 | ENSRNOT00000067940.3 | Wt1          | ENSRNOG00000013074 | Wilms tumor 1 Source RGD Symbol Acc 3974                                                     |
| 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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