

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

## Rat Cancer PathwayFinder™

Cat. no. 249955 UPRN-033ZA

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 | Acly     | Acl4    | Adm      | Angpt1  | Angpt2 | Apaf1  | Arnt   | Atp5f1a | Atrx   | Aurka | Bcl2l11 | Birc3 |
| B | Bmi1     | Car9    | Casp2    | Casp7   | Casp9  | Ccl2   | Ccnd2  | Ccnd3   | Cdc20  | Cdh2  | Cflar   | Cox5a |
| C | Cpt2     | Ddb2    | Dkc1     | Dsp     | E2f4   | Epo    | Ercc3  | Ercc5   | Ets2   | Faslg | Fgf2    | Fhl1  |
| D | Foxc2    | G6pd    | Gadd45g  | Gpd2    | Gsc    | Hmox1  | Igfbp3 | Igfbp5  | Igfbp7 | Ing1  | Kdr     | Krt14 |
| E | Pgk1     | Lig4    | Lpl      | Map2k1  | Map2k3 | Mcm2   | Mki67  | Nol3    | Ocln   | Pfkf  | Pgf     | Pinx1 |
| F | Ppp1r15a | Serpib2 | Serpinf1 | Sirt2   | Skp2   | Slc2a1 | Snai1  | Snai2   | Snai3  | Sod1  | Sox10   | Stmn1 |
| G | Tbx2     | Tek     | Tep1     | Terf2ip | Tinf2  | Tnks   | Pot1   | Uqcrrf1 | Vegfc  | Wee1  | Xiap    | Xrcc4 |
| 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      | UPFR1108876 | ENSRNOT00000043172.4  | Acly    | ENSRNOG0000016924  | ATP citrate lyase Source RGD Symbol Acc 2018                                              |
| A02      | UPFR1082627 | ENSRNOT00000026057.6  | Acsl4   | ENSRNOG0000019180  | acyl-CoA synthetase long-chain family member 4 Source RGD Symbol Acc 69401                |
| A03      | UPFR1061154 | ENSRNOT00000036718.1  | Adm     | ENSRNOG0000027030  | adrenomedullin Source RGD Symbol Acc 2047                                                 |
| 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      | UPFR1031240 | ENSRNOT00000010869.6  | Apaf1   | ENSRNOG0000008022  | apoptotic peptidase activating factor 1 Source RGD Symbol Acc 620575                      |
| A07      | UPFR1041304 | ENSRNOT00000044738.4  | Arnt    | ENSRNOG0000031174  | aryl hydrocarbon receptor nuclear translocator Source RGD Symbol Acc 2153                 |
| A08      | UPFR1028329 | ENSRNOT00000022892.5  | Atp5f1a | ENSRNOG0000017032  | ATP synthase F1 subunit alpha Source RGD Symbol Acc 619993                                |
| A09      | UPFR1051451 | ENSRNOT000000091284.1 | Atrx    | ENSRNOG00000056703 | ATRX, chromatin remodeler Source RGD Symbol Acc 619795                                    |
| A10      | UPFR1017973 | ENSRNOT000000055102.4 | Aurka   | ENSRNOG0000004479  | aurora kinase A Source RGD Symbol Acc 628895                                              |
| A11      | UPFR1027475 | ENSRNOT00000022596.6  | Bcl2l11 | ENSRNOG0000016551  | BCL2 like 11 Source RGD Symbol Acc 628774                                                 |
| A12      | UPFR1015683 | ENSRNOT00000007702.7  | Birc3   | ENSRNOG0000005731  | baculoviral IAP repeat-containing 3 Source RGD Symbol Acc 621282                          |
| B01      | UPFR1103597 | ENSRNOT000000064257.2 | Bmi1    | ENSRNOG0000016585  | BM1 proto-oncogene, polycomb ring finger Source RGD Symbol Acc 1307403                    |
| B02      | UPFR1102120 | ENSRNOT000000023060.5 | Car9    | ENSRNOG0000017073  | carbonic anhydrase 9 Source RGD Symbol Acc 1306426                                        |
| B03      | UPFR1065838 | ENSRNOT00000022543.5  | Casp2   | ENSRNOG0000016707  | caspase 2 Source RGD Symbol Acc 69274                                                     |
| B04      | UPFR1051332 | ENSRNOT000000080511.1 | Casp7   | ENSRNOG00000056216 | caspase 7 Source RGD Symbol Acc 620944                                                    |
| B05      | UPFR1054782 | ENSRNOT000000085378.1 | Casp9   | ENSRNOG0000012944  | caspase 9 Source RGD Symbol Acc 61867                                                     |
| B06      | UPFR1014050 | ENSRNOT000000009448.3 | Ccl2    | ENSRNOG0000007159  | C-C motif chemokine ligand 2 Source RGD Symbol Acc 3645                                   |
| B07      | UPFR1088052 | ENSRNOT000000086440.1 | Ccnd2   | ENSRNOG00000057710 | cyclin D2 Source RGD Symbol Acc 621083                                                    |
| B08      | UPFR1115909 | ENSRNOT000000074217.1 | Ccnd3   | ENSRNOG00000050258 | cyclin D3 Source RGD Symbol Acc 2293                                                      |
| B09      | UPFR1101685 | ENSRNOT000000036151.4 | Cdc20   | ENSRNOG00000028415 | cell division cycle 20 Source RGD Symbol Acc 620477                                       |
| B10      | UPFR1054833 | ENSRNOT000000021170.6 | Cdh2    | ENSRNOG0000015602  | cadherin 2 Source RGD Symbol Acc 69280                                                    |
| B11      | UPFR1108095 | ENSRNOT000000016730.5 | Cflar   | ENSRNOG0000012473  | CASP8 and FADD-like apoptosis regulator Source RGD Symbol Acc 620847                      |
| B12      | UPFR1109602 | ENSRNOT000000025525.4 | Cox5a   | ENSRNOG0000018816  | cytochrome c oxidase subunit 5A Source RGD Symbol Acc 620607                              |
| C01      | UPFR1106957 | ENSRNOT000000016954.3 | Cpt2    | ENSRNOG0000012443  | carnitine palmitoyltransferase 2 Source RGD Symbol Acc 2398                               |
| C02      | UPFR1019734 | ENSRNOT000000018998.8 | Ddb2    | ENSRNOG0000014071  | damage specific DNA binding protein 2 Source RGD Symbol Acc 1310164                       |
| C03      | UPFR1035204 | ENSRNOT000000089847.1 | Dkc1    | ENSRNOG00000055562 | dyskerin pseudouridine synthase 1 Source RGD Symbol Acc 621780                            |
| C04      | UPFR1093849 | ENSRNOT000000018649.6 | Dsp     | ENSRNOG0000013928  | desmoplakin Source RGD Symbol Acc 1305794                                                 |
| C05      | UPFR1044911 | ENSRNOT000000021145.7 | E2f4    | ENSRNOG0000015708  | E2F transcription factor 4 Source RGD Symbol Acc 2322129                                  |
| C06      | UPFR1023629 | ENSRNOT000000001914.4 | Epo     | ENSRNOG0000001412  | erythropoietin Source RGD Symbol Acc 2559                                                 |
| C07      | UPFR1108612 | ENSRNOT000000018422.6 | Ercc3   | ENSRNOG0000013180  | ERCC excision repair 3, TFIIH core complex helicase subunit Source RGD Symbol Acc 1307139 |
| C08      | UPFR1105795 | ENSRNOT000000059349.4 | Ercc5   | ENSRNOG00000022812 | ERCC excision repair 5, endonuclease Source RGD Symbol Acc 1586176                        |
| C09      | UPFR1103791 | ENSRNOT000000002247.6 | Ets2    | ENSRNOG0000001647  | ETS proto-oncogene 2, transcription factor Source RGD Symbol Acc 1584977                  |
| C10      | UPFR1108356 | ENSRNOT000000003998.2 | Faslg   | ENSRNOG0000002978  | Fas ligand Source RGD Symbol Acc 3880                                                     |
|          |             | ENSRNOT000000         |         | ENSRNOG00          |                                                                                           |

| Position | Assay       | Name                 | Symbol   | Ensembl ID         | Description                                                                  |
|----------|-------------|----------------------|----------|--------------------|------------------------------------------------------------------------------|
| C11      | UPFR1033121 | 023388.5             | Fgf2     | 000017392          | fibroblast growth factor 2 Source RGD Symbol Acc 2609                        |
| C12      | UPFR1070633 | ENSRNOT0000001248.3  | Flt1     | ENSRNOG0000000940  | FMS-related tyrosine kinase 1 Source RGD Symbol Acc 2621                     |
| D01      | UPFR1102350 | ENSRNOT00000072369.1 | Foxc2    | ENSRNOG00000047446 | forkhead box C2 Source RGD Symbol Acc 621703                                 |
| D02      | UPFR1120389 | ENSRNOT00000080887.1 | G6pd     | ENSRNOG00000056728 | glucose-6-phosphate dehydrogenase Source RGD Symbol Acc 2645                 |
| D03      | UPFR1119739 | ENSRNOT00000018252.7 | Gadd45g  | ENSRNOG00000013090 | growth arrest and DNA-damage-inducible, gamma Source RGD Symbol Acc 1311796  |
| D04      | UPFR1065011 | ENSRNOT00000088589.1 | Gpd2     | ENSRNOG00000033824 | glycerol-3-phosphate dehydrogenase 2 Source RGD Symbol Acc 2726              |
| D05      | UPFR1038732 | ENSRNOT00000014204.5 | Gsc      | ENSRNOG00000010605 | goosecoid homeobox Source RGD Symbol Acc 631425                              |
| D06      | UPFR1040868 | ENSRNOT00000019192.6 | Hmox1    | ENSRNOG00000014117 | heme oxygenase 1 Source RGD Symbol Acc 2806                                  |
| D07      | UPFR1013429 | ENSRNOT00000088355.1 | Igfbp3   | ENSRNOG00000061910 | insulin-like growth factor binding protein 3 Source RGD Symbol Acc 2874      |
| D08      | UPFR1090111 | ENSRNOT00000079493.1 | Igfbp5   | ENSRNOG00000017206 | insulin-like growth factor binding protein 5 Source RGD Symbol Acc 2876      |
| D09      | UPFR1107856 | ENSRNOT00000002809.4 | Igfbp7   | ENSRNOG00000002050 | insulin-like growth factor binding protein 7 Source RGD Symbol Acc 1306201   |
| D10      | UPFR1028569 | ENSRNOT00000019454.7 | Ing1     | ENSRNOG00000014520 | inhibitor of growth family, member 1 Source RGD Symbol Acc 1306330           |
| D11      | UPFR1041145 | ENSRNOT00000085089.1 | Kdr      | ENSRNOG00000046829 | kinase insert domain receptor Source RGD Symbol Acc 2965                     |
| D12      | UPFR1102701 | ENSRNOT00000005285.4 | Krt14    | ENSRNOG0000003899  | keratin 14 Source RGD Symbol Acc 1307463                                     |
| E01      | UPFR1132956 | ENSRNOT00000077604.1 | Pgk1     | ENSRNOG00000058249 | phosphoglycerate kinase 1 Source RGD Symbol Acc 619878                       |
| E02      | UPFR1084917 | ENSRNOT00000019615.5 | Lig4     | ENSRNOG00000014605 | DNA ligase 4 Source RGD Symbol Acc 1304639                                   |
| E03      | UPFR1016556 | ENSRNOT00000016543.3 | Lpl      | ENSRNOG00000012181 | lipoprotein lipase Source RGD Symbol Acc 3017                                |
| E04      | UPFR1053192 | ENSRNOT00000013933.6 | Map2k1   | ENSRNOG00000010176 | mitogen activated protein kinase kinase 1 Source RGD Symbol Acc 70495        |
| E05      | UPFR1058261 | ENSRNOT00000073792.2 | Map2k3   | ENSRNOG00000049132 | mitogen activated protein kinase kinase 3 Source RGD Symbol Acc 1306620      |
| E06      | UPFR1049442 | ENSRNOT00000022231.6 | Mcm2     | ENSRNOG00000016316 | minichromosome maintenance complex component 2 Source RGD Symbol Acc 1305577 |
| E07      | UPFR1066912 | ENSRNOT00000038176.5 | Mki67    | ENSRNOG00000028137 | marker of proliferation Ki-67 Source RGD Symbol Acc 1305476                  |
| E08      | UPFR1059501 | ENSRNOT00000020908.5 | Nol3     | ENSRNOG00000015588 | nucleolar protein 3 Source RGD Symbol Acc 708558                             |
| E09      | UPFR1027887 | ENSRNOT00000084667.1 | Ocln     | ENSRNOG00000018297 | occludin Source RGD Symbol Acc 620089                                        |
| E10      | UPFR1094920 | ENSRNOT00000001625.5 | Pfkfb3   | ENSRNOG0000001214  | phosphofructokinase, liver type Source RGD Symbol Acc 3311                   |
| E11      | UPFR1118244 | ENSRNOT00000007790.5 | Pgf      | ENSRNOG00000005650 | placental growth factor Source RGD Symbol Acc 619850                         |
| E12      | UPFR1014948 | ENSRNOT00000016027.5 | Pinx1    | ENSRNOG00000012012 | PIN2/TERF1 interacting, telomerase inhibitor 1 Source RGD Symbol Acc 1566025 |
| F01      | UPFR1020390 | ENSRNOT00000044788.4 | Ppp1r15a | ENSRNOG00000020938 | protein phosphatase 1, regulatory subunit 15A Source RGD Symbol Acc 621526   |
| F02      | UPFR1020681 | ENSRNOT00000003409.5 | Serpina2 | ENSRNOG00000002460 | serpin family B member 2 Source RGD Symbol Acc 621823                        |
| F03      | UPFR1094992 | ENSRNOT00000004313.5 | Serpina1 | ENSRNOG00000003172 | serpin family F member 1 Source RGD Symbol Acc 631369                        |
| F04      | UPFR1049217 | ENSRNOT00000084839.1 | Sirt2    | ENSRNOG00000020102 | sirtuin 2 Source RGD Symbol Acc 621481                                       |
| F05      | UPFR1041501 | ENSRNOT00000089178.1 | Skp2     | ENSRNOG00000059059 | S-phase kinase associated protein 2 Source RGD Symbol Acc 1562456            |
| F06      | UPFR1052096 | ENSRNOT00000083700.1 | Slc2a1   | ENSRNOG00000007284 | solute carrier family 2 member 1 Source RGD Symbol Acc 3704                  |
| F07      | UPFR1119713 | ENSRNOT00000077581.1 | Snai1    | ENSRNOG00000009594 | snail family transcriptional repressor 1 Source RGD Symbol Acc 620758        |
| F08      | UPFR1014151 | ENSRNOT00000073049.2 | Snai2    | ENSRNOG00000047699 | snail family transcriptional repressor 2 Source RGD Symbol Acc 3722          |
| F09      | UPFR1061475 | ENSRNOT00000018387.6 | Snai3    | ENSRNOG00000013586 | snail family transcriptional repressor 3 Source RGD Symbol Acc 1309658       |
| F10      | UPFR1062096 | ENSRNOT00000002885.6 | Sod1     | ENSRNOG00000002115 | superoxide dismutase 1 Source RGD Symbol Acc 3731                            |

| Position | Assay       | Name                 | Symbol  | Ensembl ID         | Description                                                                                     |
|----------|-------------|----------------------|---------|--------------------|-------------------------------------------------------------------------------------------------|
| F11      | UPFR1096108 | ENSRNOT00000015283.3 | Sox10   | ENSRNOG00000011305 | SRY box 10 Source RGD Symbol Acc 3735                                                           |
| F12      | UPFR1042874 | ENSRNOT00000022574.5 | Stmn1   | ENSRNOG00000016810 | stathmin 1 Source RGD Symbol Acc 2992                                                           |
| G01      | UPFR1025058 | ENSRNOT00000004698.7 | Tbx2    | ENSRNOG00000003517 | T-box 2 Source RGD Symbol Acc 1311014                                                           |
| G02      | UPFR1031924 | ENSRNOT00000032248.3 | Tek     | ENSRNOG00000008587 | TEK receptor tyrosine kinase Source RGD Symbol Acc 620980                                       |
| G03      | UPFR1079677 | ENSRNOT00000088981.1 | Tep1    | ENSRNOG00000051706 | telomerase associated protein 1 Source RGD Symbol Acc 3869                                      |
| G04      | UPFR1083683 | ENSRNOT00000014660.6 | Terf2ip | ENSRNOG00000010712 | TERF2 interacting protein Source RGD Symbol Acc 1309684                                         |
| G05      | UPFR1103806 | ENSRNOT00000027362.5 | Tinf2   | ENSRNOG00000020189 | TERF1 interacting nuclear factor 2 Source RGD Symbol Acc 1359192                                |
| G06      | UPFR1048206 | ENSRNOT00000015813.6 | Tnks    | ENSRNOG00000011625 | tankyrase Source RGD Symbol Acc 1308784                                                         |
| G07      | UPFR1059977 | ENSRNOT00000079130.1 | Pot1    | ENSRNOG00000019986 | protection of telomeres 1 Source RGD Symbol Acc 1562696                                         |
| G08      | UPFR1112253 | ENSRNOT00000024609.6 | Uqcrrf1 | ENSRNOG00000018281 | ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 Source RGD Symbol Acc 628838 |
| G09      | UPFR1108264 | ENSRNOT00000015529.4 | Vegfc   | ENSRNOG00000011416 | vascular endothelial growth factor C Source RGD Symbol Acc 619800                               |
| G10      | UPFR1029258 | ENSRNOT00000013362.5 | Wee1    | ENSRNOG00000010017 | WEE1 G2 checkpoint kinase Source RGD Symbol Acc 1307895                                         |
| G11      | UPFR1049285 | ENSRNOT00000009336.3 | Xiap    | ENSRNOG00000006967 | X-linked inhibitor of apoptosis Source RGD Symbol Acc 620692                                    |
| G12      | UPFR1037605 | ENSRNOT00000045850.2 | Xrcc4   | ENSRNOG00000029966 | X-ray repair cross complementing 4 Source RGD Symbol Acc 1359573                                |
| 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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