

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

## Human WNT Signaling Pathway

Cat. no. 249955 UPHS-043ZR

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 (Rotor-Gene): QuantiNova LNA Probe 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 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 | AES      | APC   | AXIN1 | AXIN2  | BCL9   | BTRC    | CCND1    | CCND2 | CSNK1A1 | CSNK2A1 | CTBP1  | CTNNB1 |
| B | CTNNBIP1 | CXIC4 | DAAM1 | DAB2   | DIXDC1 | DKK1    | DKK3     | DVL1  | DVL2    | EP300   | FBXW11 | FBXW4  |
| C | FGF4     | FOSL1 | FOXP1 | FRAT1  | FRZB   | FZD1    | FZD2     | FZD3  | FZD4    | FZD5    | FZD6   | FZD7   |
| D | FZD8     | FZD9  | GSK3A | GSK3B  | JUN    | KREMEN1 | LEF1     | LRP5  | LRP6    | MAPK8   | MMP7   | MYC    |
| E | NFATC1   | NKD1  | NLK   | PITX2  | PORCN  | PPARD   | PRICKLE1 | PYGO1 | RHOA    | RHOU    | RUVBL1 | SFRP1  |
| F | SFRP4    | SOX17 | TCF7  | TCF7L1 | TLE1   | VANGL2  | WIF1     | CCN4  | WNT1    | WNT10A  | WNT11  | WNT16  |
| G | WNT2     | WNT2B | WNT3  | WNT3A  | WNT4   | WNT5A   | WNT5B    | WNT6  | WNT7A   | WNT7B   | WNT8A  | WNT9A  |
| H | ACTB     | B2M   | GAPDH | HPRT1  | RPLP0  | HGDC    | QIC      | QIC   | QIC     | PPC     | PPC    | PPC    |

## Gene table: QuantiNova LNA Probe PCR Focus Panel

| Position | Assay       | Name                  | Symbol   | Ensembl ID           | Description   |
|----------|-------------|-----------------------|----------|----------------------|---|
| A01      | UPFH0305322 | ENST00000327<br>141.8 | AES      | ENSG000000<br>104964 | amino-terminal enhancer of split Source HGNC Symbol Acc HGNC 307                                  |
| A02      | UPFH1132236 | ENST00000257<br>430.9 | APC      | ENSG000000<br>134982 | APC, WNT signaling pathway regulator Source HGNC Symbol Acc HGNC 583                              |
| A03      | UPFH1132262 | ENST00000262<br>320.8 | AXIN1    | ENSG000000<br>103126 | axin 1 Source HGNC Symbol Acc HGNC 903  |
| A04      | UPFH1132263 | ENST00000375<br>702.5 | AXIN2    | ENSG000000<br>168646 | axin 2 Source HGNC Symbol Acc HGNC 904  |
| A05      | UPFH1132272 | ENST00000234<br>739.8 | BCL9     | ENSG000000<br>116128 | BCL9, transcription coactivator Source HGNC Symbol Acc HGNC 1008                                  |
| A06      | UPFH0358747 | ENST00000370<br>187.8 | BTRC     | ENSG000000<br>166167 | beta-transducin repeat containing E3 ubiquitin protein ligase Source HGNC<br>Symbol Acc HGNC 1144 |
| A07      | UPFH0430337 | ENST00000227<br>507.2 | CCND1    | ENSG000000<br>110092 | cyclin D1 Source HGNC Symbol Acc HGNC 1582  |
| A08      | UPFH1132296 | ENST00000261<br>254.8 | CCND2    | ENSG000000<br>118971 | cyclin D2 Source HGNC Symbol Acc HGNC 1583  |
| A09      | UPFH0546143 | ENST00000377<br>843.6 | CSNK1A1  | ENSG000000<br>113712 | casein kinase 1 alpha 1 Source HGNC Symbol Acc HGNC 2451  |
| A10      | UPFH0055149 | ENST00000645<br>249.1 | CSNK2A1  | ENSG000000<br>101266 | casein kinase 2 alpha 1 Source HGNC Symbol Acc HGNC 2457  |
| A11      | UPFH1132339 | ENST00000382<br>952.7 | CTBP1    | ENSG000000<br>159692 | C-terminal binding protein 1 Source HGNC Symbol Acc HGNC 2494                                     |
| A12      | UPFH0097734 | ENST00000396<br>183.7 | CTNNB1   | ENSG000000<br>168036 | catenin beta 1 Source HGNC Symbol Acc HGNC 2514   |
| B01      | UPFH1132341 | ENST00000377<br>258.5 | CTNNBIP1 | ENSG000000<br>178585 | catenin beta interacting protein 1 Source HGNC Symbol Acc HGNC 16913                              |
| B02      | UPFH0576231 | ENST00000394<br>767.3 | CXXC4    | ENSG000000<br>168772 | CXXC finger protein 4 Source HGNC Symbol Acc HGNC 24593   |
| B03      | UPFH1132352 | ENST00000360<br>909.7 | DAAM1    | ENSG000000<br>100592 | dishevelled associated activator of morphogenesis 1 Source HGNC Symbol Acc<br>HGNC 18142          |
| B04      | UPFH1132353 | ENST00000509<br>337.5 | DAB2     | ENSG000000<br>153071 | DAB2, clathrin adaptor protein Source HGNC Symbol Acc HGNC 2662                                   |
| B05      | UPFH1132361 | ENST00000440<br>460.6 | DIXDC1   | ENSG000000<br>150764 | DIX domain containing 1 Source HGNC Symbol Acc HGNC 23695   |
| B06      | UPFH1132868 | ENST00000373<br>970.4 | DKK1     | ENSG000000<br>107984 | dickkopf WNT signaling pathway inhibitor 1 Source HGNC Symbol Acc HGNC<br>2891                    |
| B07      | UPFH1132869 | ENST00000525<br>493.5 | DKK3     | ENSG000000<br>050165 | dickkopf WNT signaling pathway inhibitor 3 Source HGNC Symbol Acc HGNC<br>2893                    |
| B08      | UPFH0264310 | ENST00000378<br>891.9 | DVL1     | ENSG000000<br>107404 | dishevelled segment polarity protein 1 Source HGNC Symbol Acc HGNC 3084                           |
| B09      | UPFH1132373 | ENST00000575<br>458.5 | DVL2     | ENSG000000<br>004975 | dishevelled segment polarity protein 2 Source HGNC Symbol Acc HGNC 3086                           |
| B10      | UPFH0118049 | ENST00000635<br>691.1 | EP300    | ENSG000000<br>100393 | E1A binding protein p300 Source HGNC Symbol Acc HGNC 3373   |
| B11      | UPFH0321621 | ENST00000265<br>094.9 | FBXW11   | ENSG000000<br>072803 | F-box and WD repeat domain containing 11 Source HGNC Symbol Acc HGNC<br>13607                     |
| B12      | UPFH1132398 | ENST00000331<br>272.8 | FBXW4    | ENSG000000<br>107829 | F-box and WD repeat domain containing 4 Source HGNC Symbol Acc HGNC<br>10847                      |
| C01      | UPFH1172907 | ENST00000168<br>712.3 | FGF4     | ENSG000000<br>075388 | fibroblast growth factor 4 Source HGNC Symbol Acc HGNC 3682                                       |
| C02      | UPFH0457684 | ENST00000312<br>562.6 | FOSL1    | ENSG000000<br>175592 | FOS like 1, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC<br>13718                |
| C03      | UPFH0482655 | ENST00000579<br>795.5 | FOXN1    | ENSG000000<br>109101 | forkhead box N1 Source HGNC Symbol Acc HGNC 12765   |
| C04      | UPFH0606332 | ENST00000371<br>021.4 | FRAT1    | ENSG000000<br>165879 | FRAT1, WNT signaling pathway regulator Source HGNC Symbol Acc HGNC<br>3944                        |
| C05      | UPFH1132870 | ENST00000295<br>113.5 | FRZB     | ENSG000000<br>162998 | frizzled related protein Source HGNC Symbol Acc HGNC 3959   |
| C06      | UPFH0039775 | ENST00000287<br>934.3 | FZD1     | ENSG000000<br>157240 | frizzled class receptor 1 Source HGNC Symbol Acc HGNC 4038  |
| C07      | UPFH0607599 | ENST00000315<br>323.4 | FZD2     | ENSG000000<br>180340 | frizzled class receptor 2 Source HGNC Symbol Acc HGNC 4040  |
| C08      | UPFH1132405 | ENST00000537<br>916.2 | FZD3     | ENSG000000<br>104290 | frizzled class receptor 3 Source HGNC Symbol Acc HGNC 4041  |
| C09      | UPFH1132406 | ENST00000531<br>380.2 | FZD4     | ENSG000000<br>174804 | frizzled class receptor 4 Source HGNC Symbol Acc HGNC 4042  |
| C10      | UPFH1132407 | ENST00000295<br>417.4 | FZD5     | ENSG000000<br>163251 | frizzled class receptor 5 Source HGNC Symbol Acc HGNC 4043  |
|          |             | ENST00000523          |          | ENSG000000           |   |

| Position | Assay       | Name               | Symbol   | Ensembl ID      | Description  |
|----------|-------------|--------------------|----------|-----------------|--|
| C11      | UPFH1132408 | 739.5              | FZD6     | 164930          | frizzled class receptor 6 Source HGNC Symbol Acc HGNC 4044                             |
| C12      | UPFH0485950 | ENST00000286201.2  | FZD7     | ENSG00000155760 | frizzled class receptor 7 Source HGNC Symbol Acc HGNC 4045                             |
| D01      | UPFH0494687 | ENST000003374694.2 | FZD8     | ENSG00000177283 | frizzled class receptor 8 Source HGNC Symbol Acc HGNC 4046                             |
| D02      | UPFH0444740 | ENST000003344575.4 | FZD9     | ENSG00000188763 | frizzled class receptor 9 Source HGNC Symbol Acc HGNC 4047                             |
| D03      | UPFH1132428 | ENST000003398249.8 | GSK3A    | ENSG00000105723 | glycogen synthase kinase 3 alpha Source HGNC Symbol Acc HGNC 4616                      |
| D04      | UPFH0470775 | ENST000003316626.5 | GSK3B    | ENSG00000082701 | glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617                       |
| D05      | UPFH0569765 | ENST000003371222.3 | JUN      | ENSG00000177606 | Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204 |
| D06      | UPFH0433367 | ENST00000400335.8  | KREMEN1  | ENSG00000183762 | kringle containing transmembrane protein 1 Source HGNC Symbol Acc HGNC 17550           |
| D07      | UPFH1132518 | ENST00000438313.6  | LEF1     | ENSG00000138795 | lymphoid enhancer binding factor 1 Source HGNC Symbol Acc HGNC 6551                    |
| D08      | UPFH1132877 | ENST00000294304.12 | LRP5     | ENSG00000162337 | LDL receptor related protein 5 Source HGNC Symbol Acc HGNC 6697                        |
| D09      | UPFH1132525 | ENST00000543091.1  | LRP6     | ENSG00000070018 | LDL receptor related protein 6 Source HGNC Symbol Acc HGNC 6698                        |
| D10      | UPFH1132535 | ENST000003374179.8 | MAPK8    | ENSG00000107643 | mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881                    |
| D11      | UPFH0230006 | ENST00000260227.5  | MMP7     | ENSG00000137673 | matrix metalloproteinase 7 Source HGNC Symbol Acc HGNC 7174                            |
| D12      | UPFH1132563 | ENST00000517291.1  | MYC      | ENSG00000136997 | MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553         |
| E01      | UPFH0595445 | ENST00000591814.5  | NFATC1   | ENSG00000131196 | nuclear factor of activated T cells 1 Source HGNC Symbol Acc HGNC 7775                 |
| E02      | UPFH1132895 | ENST00000268459.6  | NKD1     | ENSG00000140807 | NKD1, WNT signaling pathway inhibitor Source HGNC Symbol Acc HGNC 17045                |
| E03      | UPFH1132593 | ENST00000407008.8  | NLK      | ENSG00000087095 | nemo like kinase Source HGNC Symbol Acc HGNC 29858                                     |
| E04      | UPFH0543151 | ENST00000607868.1  | PITX2    | ENSG00000164093 | paired like homeodomain 2 Source HGNC Symbol Acc HGNC 9005                             |
| E05      | UPFH1132626 | ENST000003361988.7 | PORCN    | ENSG00000102312 | porcupine O-acyltransferase Source HGNC Symbol Acc HGNC 17652                          |
| E06      | UPFH1132629 | ENST00000448077.6  | PPARD    | ENSG00000112033 | peroxisome proliferator activated receptor delta Source HGNC Symbol Acc HGNC 9235      |
| E07      | UPFH1132633 | ENST00000445766.7  | PRICKLE1 | ENSG00000139174 | prickle planar cell polarity protein 1 Source HGNC Symbol Acc HGNC 17019               |
| E08      | UPFH1125818 | ENST00000302000.10 | PYGO1    | ENSG00000171016 | pygopus family PHD finger 1 Source HGNC Symbol Acc HGNC 30256                          |
| E09      | UPFH1132657 | ENST00000445425.4  | RHOA     | ENSG00000067560 | ras homolog family member A Source HGNC Symbol Acc HGNC 667                            |
| E10      | UPFH0350717 | ENST000003366691.4 | RHOU     | ENSG00000116574 | ras homolog family member U Source HGNC Symbol Acc HGNC 17794                          |
| E11      | UPFH1132666 | ENST00000478892.1  | RUVBL1   | ENSG00000175792 | RuvB like AAA ATPase 1 Source HGNC Symbol Acc HGNC 10474                               |
| E12      | UPFH1132676 | ENST00000220772.8  | SFRP1    | ENSG00000104332 | secreted frizzled related protein 1 Source HGNC Symbol Acc HGNC 10776                  |
| F01      | UPFH1132677 | ENST00000436072.7  | SFRP4    | ENSG00000106483 | secreted frizzled related protein 4 Source HGNC Symbol Acc HGNC 10778                  |
| F02      | UPFH1132969 | ENST00000297316.5  | SOX17    | ENSG00000164736 | SRY-box 17 Source HGNC Symbol Acc HGNC 18122   |
| F03      | UPFH1132709 | ENST00000520958.5  | TCF7     | ENSG00000081059 | transcription factor 7 Source HGNC Symbol Acc HGNC 11639                               |
| F04      | UPFH1132710 | ENST00000282111.4  | TCF7L1   | ENSG00000152284 | transcription factor 7 like 1 Source HGNC Symbol Acc HGNC 11640                        |
| F05      | UPFH1132727 | ENST000003376499.8 | TLE1     | ENSG00000196781 | TLE family member 1, transcriptional corepressor Source HGNC Symbol Acc HGNC 11837     |
| F06      | UPFH1132754 | ENST000003368061.3 | VANGL2   | ENSG00000162738 | VANGL planar cell polarity protein 2 Source HGNC Symbol Acc HGNC 15511                 |
| F07      | UPFH1132759 | ENST00000286574.9  | WIF1     | ENSG00000156076 | WNT inhibitory factor 1 Source HGNC Symbol Acc HGNC 18081                              |
| F08      | UPFH0155085 | ENST00000220856.6  | CCN4     | ENSG00000104415 | cellular communication network factor 4 Source HGNC Symbol Acc HGNC 12769              |
| F09      | UPFH0344484 | ENST00000293549.3  | WNT1     | ENSG00000125084 | Wnt family member 1 Source HGNC Symbol Acc HGNC 12774                                  |
| F10      | UPFH1172916 | ENST00000258411.8  | WNT10A   | ENSG00000135925 | Wnt family member 10A Source HGNC Symbol Acc HGNC 13829                                |

| Position | Assay       | Name               | Symbol | Ensembl ID      | Description  |
|----------|-------------|--------------------|--------|-----------------|--|
| F11      | UPFH1132929 | ENST00000322563.8  | WNT11  | ENSG00000085741 | Wnt family member 11 Source HGNC Symbol Acc HGNC 12776                       |
| F12      | UPFH1132761 | ENST00000361301.6  | WNT16  | ENSG00000002745 | Wnt family member 16 Source HGNC Symbol Acc HGNC 16267                       |
| G01      | UPFH0138379 | ENST00000265441.7  | WNT2   | ENSG00000105989 | Wnt family member 2 Source HGNC Symbol Acc HGNC 12780                        |
| G02      | UPFH0204669 | ENST00000369686.9  | WNT2B  | ENSG00000134245 | Wnt family member 2B Source HGNC Symbol Acc HGNC 12781                       |
| G03      | UPFH1132762 | ENST00000225512.6  | WNT3   | ENSG00000108379 | Wnt family member 3 Source HGNC Symbol Acc HGNC 12782                        |
| G04      | UPFH0486867 | ENST00000284523.2  | WNT3A  | ENSG00000154342 | Wnt family member 3A Source HGNC Symbol Acc HGNC 15983                       |
| G05      | UPFH1132763 | ENST00000290167.11 | WNT4   | ENSG00000162552 | Wnt family member 4 Source HGNC Symbol Acc HGNC 12783                        |
| G06      | UPFH0355989 | ENST00000264634.8  | WNT5A  | ENSG00000114251 | Wnt family member 5A Source HGNC Symbol Acc HGNC 12784                       |
| G07      | UPFH1132764 | ENST00000537031.5  | WNT5B  | ENSG00000111186 | Wnt family member 5B Source HGNC Symbol Acc HGNC 16265                       |
| G08      | UPFH1132765 | ENST00000233948.4  | WNT6   | ENSG00000115596 | Wnt family member 6 Source HGNC Symbol Acc HGNC 12785                        |
| G09      | UPFH0406663 | ENST00000285018.4  | WNT7A  | ENSG00000154764 | Wnt family member 7A Source HGNC Symbol Acc HGNC 12786                       |
| G10      | UPFH1132766 | ENST00000410058.1  | WNT7B  | ENSG00000188064 | Wnt family member 7B Source HGNC Symbol Acc HGNC 12787                       |
| G11      | UPFH0320758 | ENST00000398754.1  | WNT8A  | ENSG00000061492 | Wnt family member 8A Source HGNC Symbol Acc HGNC 12788                       |
| G12      | UPFH0030443 | ENST00000272164.6  | WNT9A  | ENSG00000143816 | Wnt family member 9A Source HGNC Symbol Acc HGNC 12778                       |
| H01      | UPFH1132936 | ENST00000646664.1  | ACTB   | ENSG00000075624 | actin beta Source HGNC Symbol Acc HGNC 132                                   |
| H02      | UPFH1132937 | ENST00000544417.5  | B2M    | ENSG00000166710 | beta-2-microglobulin Source HGNC Symbol Acc HGNC 914                         |
| H03      | UPFH1132938 | ENST00000229239.10 | GAPDH  | ENSG00000111640 | glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141    |
| H04      | UPFH1132939 | ENST00000298556.8  | HPRT1  | ENSG00000165704 | hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157    |
| H05      | UPFH1132941 | ENST00000392514.9  | RPLP0  | ENSG00000089157 | ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371 |
| H06      | UPFH1126608 | UPL_HGDC           | HGDC   | UPL_HGDC        | Human 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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