

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

## Human Cytokines & Chemokines

Cat. no. 249955 UPHS-150ZA

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 | ADIPOQ | BMP2  | BMP4   | BMP6  | BMP7   | C5     | CCL1      | CCL11   | CCL13   | CCL17    | CCL18 | CCL19 |
| B | CCL2   | CCL20 | CCL21  | CCL22 | CCL24  | CCL3   | CCL5      | CCL7    | CCL8    | CD40LG   | CNTF  | CSF1  |
| C | CSF2   | CSF3  | CX3CL1 | CXCL1 | CXCL10 | CXCL11 | CXCL12    | CXCL13  | CXCL16  | CXCL2    | CXCL5 | CXCL9 |
| D | FASLG  | GPI   | IFNA2  | IFNG  | IL10   | IL11   | IL12A     | IL12B   | IL13    | IL15     | IL16  | IL17A |
| E | IL17F  | IL18  | IL1A   | IL1B  | IL1RN  | IL2    | IL21      | IL22    | IL23A   | IL24     | IL27  | IL3   |
| F | IL4    | IL5   | IL6    | IL7   | CXCL8  | IL9    | LIF       | LTA     | LTB     | MIF      | MSTN  | NODAL |
| G | OSM    | PPBP  | SPP1   | TGFB2 | THPO   | TNF    | TNFRSF11B | TNFSF10 | TNFSF11 | TNFSF13B | VEGFA | XL1   |
| 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      | UPFH1132772 | ENST00000320741.7   | ADIPOQ | ENSG00000181092 | adiponectin, C1Q and collagen domain containing Source HGNC Symbol Acc HGNC 13633 |
| A02      | UPFH1132780 | ENST000003378827.5  | BMP2   | ENSG00000125845 | bone morphogenetic protein 2 Source HGNC Symbol Acc HGNC 1069                     |
| A03      | UPFH0443169 | ENST00000558984.1   | BMP4   | ENSG00000125378 | bone morphogenetic protein 4 Source HGNC Symbol Acc HGNC 1071                     |
| A04      | UPFH1172901 | ENST00000283147.7   | BMP6   | ENSG00000153162 | bone morphogenetic protein 6 Source HGNC Symbol Acc HGNC 1073                     |
| A05      | UPFH1132781 | ENST00000433911.1   | BMP7   | ENSG00000101144 | bone morphogenetic protein 7 Source HGNC Symbol Acc HGNC 1074                     |
| A06      | UPFH0177852 | ENST00000223642.2   | C5     | ENSG00000106804 | complement C5 Source HGNC Symbol Acc HGNC 1331                                    |
| A07      | UPFH0203536 | ENST00000225842.3   | CCL1   | ENSG00000108702 | C-C motif chemokine ligand 1 Source HGNC Symbol Acc HGNC 10609                    |
| A08      | UPFH0201571 | ENST00000305869.3   | CCL11  | ENSG00000172156 | C-C motif chemokine ligand 11 Source HGNC Symbol Acc HGNC 10610                   |
| A09      | UPFH1132286 | ENST00000225844.7   | CCL13  | ENSG00000181374 | C-C motif chemokine ligand 13 Source HGNC Symbol Acc HGNC 10611                   |
| A10      | UPFH0117775 | ENST00000219244.8   | CCL17  | ENSG00000102970 | C-C motif chemokine ligand 17 Source HGNC Symbol Acc HGNC 10615                   |
| A11      | UPFH0121778 | ENST00000616054.1   | CCL18  | ENSG00000275385 | C-C motif chemokine ligand 18 Source HGNC Symbol Acc HGNC 10616                   |
| A12      | UPFH1132288 | ENST000003378800.3  | CCL19  | ENSG00000172724 | C-C motif chemokine ligand 19 Source HGNC Symbol Acc HGNC 10617                   |
| B01      | UPFH1132783 | ENST00000225831.4   | CCL2   | ENSG00000108691 | C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618                    |
| B02      | UPFH1132289 | ENST000003358813.5  | CCL20  | ENSG00000115009 | C-C motif chemokine ligand 20 Source HGNC Symbol Acc HGNC 10619                   |
| B03      | UPFH1132290 | ENST000003378792.1  | CCL21  | ENSG00000137077 | C-C motif chemokine ligand 21 Source HGNC Symbol Acc HGNC 10620                   |
| B04      | UPFH1132291 | ENST00000219235.5   | CCL22  | ENSG00000102962 | C-C motif chemokine ligand 22 Source HGNC Symbol Acc HGNC 10621                   |
| B05      | UPFH0216555 | ENST00000222902.6   | CCL24  | ENSG00000106178 | C-C motif chemokine ligand 24 Source HGNC Symbol Acc HGNC 10623                   |
| B06      | UPFH1132784 | ENST00000613922.2   | CCL3   | ENSG00000277632 | C-C motif chemokine ligand 3 Source HGNC Symbol Acc HGNC 10627                    |
| B07      | UPFH1132786 | ENST00000603197.6   | CCL5   | ENSG00000271503 | C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632                    |
| B08      | UPFH0186519 | ENST000003378569.2  | CCL7   | ENSG00000108688 | C-C motif chemokine ligand 7 Source HGNC Symbol Acc HGNC 10634                    |
| B09      | UPFH1132787 | ENST000003394620.2  | CCL8   | ENSG00000108700 | C-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 10635                    |
| B10      | UPFH0592498 | ENST000003370629.6  | CD40LG | ENSG00000102245 | CD40 ligand Source HGNC Symbol Acc HGNC 11935                                     |
| B11      | UPFH1172904 | ENST000003361987.6  | CNTF   | ENSG00000242689 | ciliary neurotrophic factor Source HGNC Symbol Acc HGNC 2169                      |
| B12      | UPFH1132338 | ENST000003329608.11 | CSF1   | ENSG00000184371 | colony stimulating factor 1 Source HGNC Symbol Acc HGNC 2432                      |
| C01      | UPFH1132793 | ENST00000296871.4   | CSF2   | ENSG00000164400 | colony stimulating factor 2 Source HGNC Symbol Acc HGNC 2434                      |
| C02      | UPFH1132794 | ENST00000225474.6   | CSF3   | ENSG00000108342 | colony stimulating factor 3 Source HGNC Symbol Acc HGNC 2438                      |
| C03      | UPFH1132348 | ENST00000006053.7   | CX3CL1 | ENSG00000006210 | C-X3-C motif chemokine ligand 1 Source HGNC Symbol Acc HGNC 10647                 |
| C04      | UPFH0494346 | ENST000003395761.3  | CXCL1  | ENSG00000163739 | C-X-C motif chemokine ligand 1 Source HGNC Symbol Acc HGNC 4602                   |
| C05      | UPFH0196315 | ENST000003306602.3  | CXCL10 | ENSG00000169245 | C-X-C motif chemokine ligand 10 Source HGNC Symbol Acc HGNC 10637                 |
| C06      | UPFH0421123 | ENST000003306621.7  | CXCL11 | ENSG00000169248 | C-X-C motif chemokine ligand 11 Source HGNC Symbol Acc HGNC 10638                 |
| C07      | UPFH0092551 | ENST000003374429.6  | CXCL12 | ENSG00000107562 | C-X-C motif chemokine ligand 12 Source HGNC Symbol Acc HGNC 10672                 |
| C08      | UPFH1132796 | ENST00000286758.4   | CXCL13 | ENSG00000156234 | C-X-C motif chemokine ligand 13 Source HGNC Symbol Acc HGNC 10639                 |
| C09      | UPFH1132797 | ENST00000574412.5   | CXCL16 | ENSG00000161921 | C-X-C motif chemokine ligand 16 Source HGNC Symbol Acc HGNC 16642                 |
| C10      | UPFH1132349 | ENST00000508487.3   | CXCL2  | ENSG00000081041 | C-X-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 4603                   |
|          |             | ENST00000296        |        | ENSG000000      |                                                                                   |

| Position | Assay       | Name               | Symbol | Ensembl ID      | Description                                                             |
|----------|-------------|--------------------|--------|-----------------|-------------------------------------------------------------------------|
| C11      | UPFH1132798 | 027.5              | CXCL5  | 163735          | C-X-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10642        |
| C12      | UPFH0222764 | ENST00000264888.5  | CXCL9  | ENSG00000138755 | C-X-C motif chemokine ligand 9 Source HGNC Symbol Acc HGNC 7098         |
| D01      | UPFH1132396 | ENST00000367721.3  | FASLG  | ENSG00000117560 | Fas ligand Source HGNC Symbol Acc HGNC 11936                            |
| D02      | UPFH0554980 | ENST00000644934.1  | GPI    | ENSG00000105220 | glucose-6-phosphate isomerase Source HGNC Symbol Acc HGNC 4458          |
| D03      | UPFH0206613 | ENST00000380206.3  | IFNA2  | ENSG00000188379 | interferon alpha 2 Source HGNC Symbol Acc HGNC 5423                     |
| D04      | UPFH1132473 | ENST00000229135.4  | IFNG   | ENSG00000111537 | interferon gamma Source HGNC Symbol Acc HGNC 5438                       |
| D05      | UPFH0028177 | ENST00000423557.1  | IL10   | ENSG00000136634 | interleukin 10 Source HGNC Symbol Acc HGNC 5962                         |
| D06      | UPFH1132477 | ENST00000585513.1  | IL11   | ENSG00000095752 | interleukin 11 Source HGNC Symbol Acc HGNC 5966                         |
| D07      | UPFH1132478 | ENST00000466512.1  | IL12A  | ENSG00000168811 | interleukin 12A Source HGNC Symbol Acc HGNC 5969                        |
| D08      | UPFH0131869 | ENST00000231228.2  | IL12B  | ENSG00000113302 | interleukin 12B Source HGNC Symbol Acc HGNC 5970                        |
| D09      | UPFH1132807 | ENST00000617259.2  | IL13   | ENSG00000169194 | interleukin 13 Source HGNC Symbol Acc HGNC 5973                         |
| D10      | UPFH1132873 | ENST00000296545.11 | IL15   | ENSG00000164136 | interleukin 15 Source HGNC Symbol Acc HGNC 5977                         |
| D11      | UPFH0104353 | ENST00000394652.6  | IL16   | ENSG00000172349 | interleukin 16 Source HGNC Symbol Acc HGNC 5980                         |
| D12      | UPFH0091505 | ENST00000648244.1  | IL17A  | ENSG00000112115 | interleukin 17A Source HGNC Symbol Acc HGNC 5981                        |
| E01      | UPFH1132480 | ENST00000336123.4  | IL17F  | ENSG00000112116 | interleukin 17F Source HGNC Symbol Acc HGNC 16404                       |
| E02      | UPFH1132481 | ENST00000528832.1  | IL18   | ENSG00000150782 | interleukin 18 Source HGNC Symbol Acc HGNC 5986                         |
| E03      | UPFH0436255 | ENST00000263339.3  | IL1A   | ENSG00000115008 | interleukin 1 alpha Source HGNC Symbol Acc HGNC 5991                    |
| E04      | UPFH0163764 | ENST00000263341.6  | IL1B   | ENSG00000125538 | interleukin 1 beta Source HGNC Symbol Acc HGNC 5992                     |
| E05      | UPFH0081459 | ENST00000354115.6  | IL1RN  | ENSG00000136689 | interleukin 1 receptor antagonist Source HGNC Symbol Acc HGNC 6000      |
| E06      | UPFH0116492 | ENST00000226730.4  | IL2    | ENSG00000109471 | interleukin 2 Source HGNC Symbol Acc HGNC 6001                          |
| E07      | UPFH0321856 | ENST00000648588.1  | IL21   | ENSG00000138684 | interleukin 21 Source HGNC Symbol Acc HGNC 6005                         |
| E08      | UPFH0614981 | ENST00000328087.6  | IL22   | ENSG00000127318 | interleukin 22 Source HGNC Symbol Acc HGNC 14900                        |
| E09      | UPFH1132809 | ENST00000228534.6  | IL23A  | ENSG00000110944 | interleukin 23 subunit alpha Source HGNC Symbol Acc HGNC 15488          |
| E10      | UPFH0437635 | ENST00000294984.6  | IL24   | ENSG00000162892 | interleukin 24 Source HGNC Symbol Acc HGNC 11346                        |
| E11      | UPFH0006752 | ENST00000356897.1  | IL27   | ENSG00000197272 | interleukin 27 Source HGNC Symbol Acc HGNC 19157                        |
| E12      | UPFH0282899 | ENST00000296870.2  | IL3    | ENSG00000164399 | interleukin 3 Source HGNC Symbol Acc HGNC 6011                          |
| F01      | UPFH0226437 | ENST00000231449.7  | IL4    | ENSG00000113520 | interleukin 4 Source HGNC Symbol Acc HGNC 6014                          |
| F02      | UPFH1132811 | ENST00000231454.6  | IL5    | ENSG00000113525 | interleukin 5 Source HGNC Symbol Acc HGNC 6016                          |
| F03      | UPFH1172910 | ENST00000258743.10 | IL6    | ENSG00000136244 | interleukin 6 Source HGNC Symbol Acc HGNC 6018                          |
| F04      | UPFH1132812 | ENST00000263851.9  | IL7    | ENSG00000104432 | interleukin 7 Source HGNC Symbol Acc HGNC 6023                          |
| F05      | UPFH0120553 | ENST00000307407.8  | CXCL8  | ENSG00000169429 | C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025         |
| F06      | UPFH0611711 | ENST00000274520.1  | IL9    | ENSG00000145839 | interleukin 9 Source HGNC Symbol Acc HGNC 6029                          |
| F07      | UPFH1132822 | ENST00000249075.4  | LIF    | ENSG00000128342 | LIF, interleukin 6 family cytokine Source HGNC Symbol Acc HGNC 6596     |
| F08      | UPFH1132824 | ENST00000454783.5  | LTA    | ENSG00000226979 | lymphotoxin alpha Source HGNC Symbol Acc HGNC 6709                      |
| F09      | UPFH0509119 | ENST00000429299.2  | LTB    | ENSG00000227507 | lymphotoxin beta Source HGNC Symbol Acc HGNC 6711                       |
| F10      | UPFH1132548 | ENST00000215754.8  | MIF    | ENSG00000240972 | macrophage migration inhibitory factor Source HGNC Symbol Acc HGNC 7097 |

| Position | Assay       | Name               | Symbol    | Ensembl ID      | Description                                                                  |
|----------|-------------|--------------------|-----------|-----------------|------------------------------------------------------------------------------|
| F11      | UPFH0218466 | ENST00000260950.4  | MSTN      | ENSG00000138379 | myostatin Source HGNC Symbol Acc HGNC 4223                                   |
| F12      | UPFH0200048 | ENST00000287139.7  | NODAL     | ENSG00000156574 | nodal growth differentiation factor Source HGNC Symbol Acc HGNC 7865         |
| G01      | UPFH1132603 | ENST00000215781.3  | OSM       | ENSG00000099985 | oncostatin M Source HGNC Symbol Acc HGNC 8506                                |
| G02      | UPFH1132833 | ENST00000296028.4  | PPBP      | ENSG00000163736 | pro-platelet basic protein Source HGNC Symbol Acc HGNC 9240                  |
| G03      | UPFH0044238 | ENST00000237623.11 | SPP1      | ENSG00000118785 | secreted phosphoprotein 1 Source HGNC Symbol Acc HGNC 11255                  |
| G04      | UPFH1132846 | ENST00000366929.4  | TGFB2     | ENSG00000092969 | transforming growth factor beta 2 Source HGNC Symbol Acc HGNC 11768          |
| G05      | UPFH0214871 | ENST00000204615.11 | THPO      | ENSG00000090534 | thrombopoietin Source HGNC Symbol Acc HGNC 11795                             |
| G06      | UPFH1132978 | ENST00000449264.3  | TNF       | ENSG00000232810 | tumor necrosis factor Source HGNC Symbol Acc HGNC 11892                      |
| G07      | UPFH1132851 | ENST00000297350.9  | TNFRSF11B | ENSG00000164761 | TNF receptor superfamily member 11b Source HGNC Symbol Acc HGNC 11909        |
| G08      | UPFH1132733 | ENST00000241261.7  | TNFSF10   | ENSG00000121858 | TNF superfamily member 10 Source HGNC Symbol Acc HGNC 11925                  |
| G09      | UPFH1132852 | ENST00000544862.5  | TNFSF11   | ENSG00000120659 | TNF superfamily member 11 Source HGNC Symbol Acc HGNC 11926                  |
| G10      | UPFH0487377 | ENST00000542136.1  | TNFSF13B  | ENSG00000102524 | TNF superfamily member 13b Source HGNC Symbol Acc HGNC 11929                 |
| G11      | UPFH0281656 | ENST00000425836.6  | VEGFA     | ENSG00000112715 | vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680       |
| G12      | UPFH0495407 | ENST00000367818.4  | XCL1      | ENSG00000143184 | X-C motif chemokine ligand 1 Source HGNC Symbol Acc HGNC 10645               |
| 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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