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

# Human Transcription Factors

## Cat. no. 249955 UPHS-075ZR

## 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** for further details.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | AR | ARNT | ATF1 | ATF2 | ATF3 | ATF4 | CEBPA | CEBPB | CEBPG | CREB1 | CREBBP | CTNNB1 |
| B | DR1 | E2F1 | E2F6 | EGR1 | ELK1 | ESR1 | ETS1 | ETS2 | FOS | FOXA2 | FOXG1 | FOXO1 |
| C | GATA1 | GATA2 | GATA3 | GTF2B | GTF2F1 | HAND1 | HAND2 | HDAC1 | HIF1A | HNF1A | HNF4A | HOXA5 |
| D | HSF1 | ID1 | IRF1 | JUN | JUNB | JUND | MAX | MEF2A | MEF2C | MYB | MYC | MYF5 |
| E | MYOD1 | NFAT5 | NFATC1 | NFATC2 | NFATC3 | NFATC4 | NFKB1 | NFYB | NR3C1 | PAX6 | POU2AF1 | PPARA |
| F | PPARG | RB1 | REL | RELA | RELB | SMAD1 | SMAD4 | SMAD5 | SMAD9 | SP1 | SP3 | STAT1 |
| G | STAT2 | STAT3 | STAT4 | STAT5A | STAT5B | STAT6 | TBP | TCF7L2 | TFAP2A | TGIF1 | TP53 | YY1 |
| 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 | UPFH0268128 | ENST00000374690.8 | AR | ENSG00000169083 | androgen receptor Source HGNC Symbol Acc HGNC 644 |
| A02 | UPFH1132241 | ENST00000354396.6 | ARNT | ENSG00000143437 | aryl hydrocarbon receptor nuclear translocator Source HGNC Symbol Acc HGNC 700 |
| A03 | UPFH0059653 | ENST00000551831.5 | ATF1 | ENSG00000123268 | activating transcription factor 1 Source HGNC Symbol Acc HGNC 783 |
| A04 | UPFH1132243 | ENST00000426833.7 | ATF2 | ENSG00000115966 | activating transcription factor 2 Source HGNC Symbol Acc HGNC 784 |
| A05 | UPFH0133410 | ENST00000366985.5 | ATF3 | ENSG00000162772 | activating transcription factor 3 Source HGNC Symbol Acc HGNC 785 |
| A06 | UPFH1132244 | ENST00000404241.6 | ATF4 | ENSG00000128272 | activating transcription factor 4 Source HGNC Symbol Acc HGNC 786 |
| A07 | UPFH0223943 | ENST00000498907.3 | CEBPA | ENSG00000245848 | CCAAT enhancer binding protein alpha Source HGNC Symbol Acc HGNC 1833 |
| A08 | UPFH0202295 | ENST00000303004.4 | CEBPB | ENSG00000172216 | CCAAT enhancer binding protein beta Source HGNC Symbol Acc HGNC 1834 |
| A09 | UPFH0247239 | ENST00000652630.1 | CEBPG | ENSG00000153879 | CCAAT enhancer binding protein gamma Source HGNC Symbol Acc HGNC 1837 |
| A10 | UPFH0199960 | ENST00000480189.5 | CREB1 | ENSG00000118260 | cAMP responsive element binding protein 1 Source HGNC Symbol Acc HGNC 2345 |
| A11 | UPFH0338543 | ENST00000573517.6 | CREBBP | ENSG00000005339 | CREB binding protein Source HGNC Symbol Acc HGNC 2348 |
| A12 | UPFH0097734 | ENST00000396183.7 | CTNNB1 | ENSG00000168036 | catenin beta 1 Source HGNC Symbol Acc HGNC 2514 |
| B01 | UPFH0130736 | ENST00000370267.1 | DR1 | ENSG00000117505 | down-regulator of transcription 1 Source HGNC Symbol Acc HGNC 3017 |
| B02 | UPFH1132375 | ENST00000343380.6 | E2F1 | ENSG00000101412 | E2F transcription factor 1 Source HGNC Symbol Acc HGNC 3113 |
| B03 | UPFH0283924 | ENST00000421117.1 | E2F6 | ENSG00000169016 | E2F transcription factor 6 Source HGNC Symbol Acc HGNC 3120 |
| B04 | UPFH0558832 | ENST00000239938.5 | EGR1 | ENSG00000120738 | early growth response 1 Source HGNC Symbol Acc HGNC 3238 |
| B05 | UPFH0614738 | ENST00000376983.8 | ELK1 | ENSG00000126767 | ELK1, ETS transcription factor Source HGNC Symbol Acc HGNC 3321 |
| B06 | UPFH0599047 | ENST00000206249.7 | ESR1 | ENSG00000091831 | estrogen receptor 1 Source HGNC Symbol Acc HGNC 3467 |
| B07 | UPFH0570530 | ENST00000392668.8 | ETS1 | ENSG00000134954 | ETS proto-oncogene 1, transcription factor Source HGNC Symbol Acc HGNC 3488 |
| B08 | UPFH1132389 | ENST00000360214.7 | ETS2 | ENSG00000157557 | ETS proto-oncogene 2, transcription factor Source HGNC Symbol Acc HGNC 3489 |
| B09 | UPFH1132401 | ENST00000555242.1 | FOS | ENSG00000170345 | Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796 |
| B10 | UPFH0135307 | ENST00000419308.6 | FOXA2 | ENSG00000125798 | forkhead box A2 Source HGNC Symbol Acc HGNC 5022 |
| B11 | UPFH0039193 | ENST00000637220.1 | FOXG1 | ENSG00000176165 | forkhead box G1 Source HGNC Symbol Acc HGNC 3811 |
| B12 | UPFH0401417 | ENST00000379561.6 | FOXO1 | ENSG00000150907 | forkhead box O1 Source HGNC Symbol Acc HGNC 3819 |
| C01 | UPFH0379883 | ENST00000651144.1 | GATA1 | ENSG00000102145 | GATA binding protein 1 Source HGNC Symbol Acc HGNC 4170 |
| C02 | UPFH0034415 | ENST00000430265.6 | GATA2 | ENSG00000179348 | GATA binding protein 2 Source HGNC Symbol Acc HGNC 4171 |
| C03 | UPFH1132416 | ENST00000645492.1 | GATA3 | ENSG00000107485 | GATA binding protein 3 Source HGNC Symbol Acc HGNC 4172 |
| C04 | UPFH0574147 | ENST00000370500.10 | GTF2B | ENSG00000137947 | general transcription factor IIB Source HGNC Symbol Acc HGNC 4648 |
| C05 | UPFH0550793 | ENST00000394456.10 | GTF2F1 | ENSG00000125651 | general transcription factor IIF subunit 1 Source HGNC Symbol Acc HGNC 4652 |
| C06 | UPFH0372159 | ENST00000231121.3 | HAND1 | ENSG00000113196 | heart and neural crest derivatives expressed 1 Source HGNC Symbol Acc HGNC 4807 |
| C07 | UPFH0347346 | ENST00000621866.1 | HAND2 | ENSG00000164107 | heart and neural crest derivatives expressed 2 Source HGNC Symbol Acc HGNC 4808 |
| C08 | UPFH1132434 | ENST00000373548.8 | HDAC1 | ENSG00000116478 | histone deacetylase 1 Source HGNC Symbol Acc HGNC 4852 |
| C09 | UPFH1132447 | ENST00000394997.5 | HIF1A | ENSG00000100644 | hypoxia inducible factor 1 subunit alpha Source HGNC Symbol Acc HGNC 4910 |
| C10 | UPFH0335369 | ENST00000400024.6 | HNF1A | ENSG00000135100 | HNF1 homeobox A Source HGNC Symbol Acc HGNC 11621 |
| | | ENST00000372 | | ENSG00000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| C11 | UPFH0223088 | 920.1 | HNF4A | 101076 | hepatocyte nuclear factor 4 alpha Source HGNC Symbol Acc HGNC 5024 |
| C12 | UPFH0079959 | ENST00000222726.4 | HOXA5 | ENSG00000106004 | homeobox A5 Source HGNC Symbol Acc HGNC 5106 |
| D01 | UPFH0041314 | ENST00000528838.6 | HSF1 | ENSG00000185122 | heat shock transcription factor 1 Source HGNC Symbol Acc HGNC 5224 |
| D02 | UPFH1132463 | ENST00000376112.4 | ID1 | ENSG00000125968 | inhibitor of DNA binding 1, HLH protein Source HGNC Symbol Acc HGNC 5360 |
| D03 | UPFH1132490 | ENST00000476613.1 | IRF1 | ENSG00000125347 | interferon regulatory factor 1 Source HGNC Symbol Acc HGNC 6116 |
| D04 | UPFH0569765 | ENST00000371222.3 | JUN | ENSG00000177606 | Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204 |
| D05 | UPFH1132504 | ENST00000302754.6 | JUNB | ENSG00000171223 | JunB proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6205 |
| D06 | UPFH0044624 | ENST00000252818.4 | JUND | ENSG00000130522 | JunD proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6206 |
| D07 | UPFH0191124 | ENST00000556443.5 | MAX | ENSG00000125952 | MYC associated factor X Source HGNC Symbol Acc HGNC 6913 |
| D08 | UPFH0601263 | ENST00000354410.9 | MEF2A | ENSG00000068305 | myocyte enhancer factor 2A Source HGNC Symbol Acc HGNC 6993 |
| D09 | UPFH0170268 | ENST00000424173.6 | MEF2C | ENSG00000081189 | myocyte enhancer factor 2C Source HGNC Symbol Acc HGNC 6996 |
| D10 | UPFH0414191 | ENST00000528015.5 | MYB | ENSG00000118513 | MYB proto-oncogene, transcription factor Source HGNC Symbol Acc HGNC 7545 |
| D11 | UPFH1132563 | ENST00000517291.1 | MYC | ENSG00000136997 | MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553 |
| D12 | UPFH0154332 | ENST00000228644.4 | MYF5 | ENSG00000111049 | myogenic factor 5 Source HGNC Symbol Acc HGNC 7565 |
| E01 | UPFH0179986 | ENST00000250003.4 | MYOD1 | ENSG00000129152 | myogenic differentiation 1 Source HGNC Symbol Acc HGNC 7611 |
| E02 | UPFH0317172 | ENST00000354436.6 | NFAT5 | ENSG00000102908 | nuclear factor of activated T cells 5 Source HGNC Symbol Acc HGNC 7774 |
| E03 | UPFH0595445 | ENST00000591814.5 | NFATC1 | ENSG00000131196 | nuclear factor of activated T cells 1 Source HGNC Symbol Acc HGNC 7775 |
| E04 | UPFH0101128 | ENST00000610033.5 | NFATC2 | ENSG00000101096 | nuclear factor of activated T cells 2 Source HGNC Symbol Acc HGNC 7776 |
| E05 | UPFH0123113 | ENST00000562926.5 | NFATC3 | ENSG00000072736 | nuclear factor of activated T cells 3 Source HGNC Symbol Acc HGNC 7777 |
| E06 | UPFH0189206 | ENST00000553879.5 | NFATC4 | ENSG00000100968 | nuclear factor of activated T cells 4 Source HGNC Symbol Acc HGNC 7778 |
| E07 | UPFH1132828 | ENST00000226574.9 | NFKB1 | ENSG00000109320 | nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794 |
| E08 | UPFH0383437 | ENST00000240055.8 | NFYB | ENSG00000120837 | nuclear transcription factor Y subunit beta Source HGNC Symbol Acc HGNC 7805 |
| E09 | UPFH1132917 | ENST00000394464.7 | NR3C1 | ENSG00000113580 | nuclear receptor subfamily 3 group C member 1 Source HGNC Symbol Acc HGNC 7978 |
| E10 | UPFH0078275 | ENST00000638685.1 | PAX6 | ENSG00000007372 | paired box 6 Source HGNC Symbol Acc HGNC 8620 |
| E11 | UPFH0111631 | ENST00000529065.1 | POU2AF1 | ENSG00000110777 | POU class 2 associating factor 1 Source HGNC Symbol Acc HGNC 9211 |
| E12 | UPFH0327373 | ENST00000262735.9 | PPARA | ENSG00000186951 | peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232 |
| F01 | UPFH0284890 | ENST00000477039.5 | PPARG | ENSG00000132170 | peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236 |
| F02 | UPFH0001483 | ENST00000267163.5 | RB1 | ENSG00000139687 | RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884 |
| F03 | UPFH0559135 | ENST00000295025.12 | REL | ENSG00000162924 | REL proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9954 |
| F04 | UPFH1132884 | ENST00000615805.4 | RELA | ENSG00000173039 | RELA proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9955 |
| F05 | UPFH0241038 | ENST00000625761.2 | RELB | ENSG00000104856 | RELB proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9956 |
| F06 | UPFH1132685 | ENST00000515385.1 | SMAD1 | ENSG00000170365 | SMAD family member 1 Source HGNC Symbol Acc HGNC 6767 |
| F07 | UPFH0151428 | ENST00000342988.7 | SMAD4 | ENSG00000141646 | SMAD family member 4 Source HGNC Symbol Acc HGNC 6770 |
| F08 | UPFH1132687 | ENST00000509297.6 | SMAD5 | ENSG00000113658 | SMAD family member 5 Source HGNC Symbol Acc HGNC 6771 |
| F09 | UPFH0026875 | ENST00000379826.4 | SMAD9 | ENSG00000120693 | SMAD family member 9 Source HGNC Symbol Acc HGNC 6774 |
| F10 | UPFH1132843 | ENST00000327443.9 | SP1 | ENSG00000185591 | Sp1 transcription factor Source HGNC Symbol Acc HGNC 11205 |
| | | | | | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| F11 | UPFH0045054 | ENST00000418194.6 | SP3 | ENSG00000172845 | Sp3 transcription factor Source HGNC Symbol Acc HGNC 11208 |
| F12 | UPFH1132696 | ENST00000392323.6 | STAT1 | ENSG00000115415 | signal transducer and activator of transcription 1 Source HGNC Symbol Acc HGNC 11362 |
| G01 | UPFH0338707 | ENST00000652741.1 | STAT2 | ENSG00000170581 | signal transducer and activator of transcription 2 Source HGNC Symbol Acc HGNC 11363 |
| G02 | UPFH0531262 | ENST00000404395.3 | STAT3 | ENSG00000168610 | signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364 |
| G03 | UPFH1132697 | ENST00000392320.7 | STAT4 | ENSG00000138378 | signal transducer and activator of transcription 4 Source HGNC Symbol Acc HGNC 11365 |
| G04 | UPFH0458805 | ENST00000591556.1 | STAT5A | ENSG00000126561 | signal transducer and activator of transcription 5A Source HGNC Symbol Acc HGNC 11366 |
| G05 | UPFH0498337 | ENST00000415845.1 | STAT5B | ENSG00000173757 | signal transducer and activator of transcription 5B Source HGNC Symbol Acc HGNC 11367 |
| G06 | UPFH1132845 | ENST00000553533.2 | STAT6 | ENSG00000166888 | signal transducer and activator of transcription 6 Source HGNC Symbol Acc HGNC 11368 |
| G07 | UPFH0594391 | ENST00000421512.5 | TBP | ENSG00000112592 | TATA-box binding protein Source HGNC Symbol Acc HGNC 11588 |
| G08 | UPFH0509582 | ENST00000636585.1 | TCF7L2 | ENSG00000148737 | transcription factor 7 like 2 Source HGNC Symbol Acc HGNC 11641 |
| G09 | UPFH0483123 | ENST00000498450.2 | TFAP2A | ENSG00000137203 | transcription factor AP-2 alpha Source HGNC Symbol Acc HGNC 11742 |
| G10 | UPFH1132722 | ENST00000407501.6 | TGIF1 | ENSG00000177426 | TGFB induced factor homeobox 1 Source HGNC Symbol Acc HGNC 11776 |
| G11 | UPFH0565795 | ENST00000269305.8 | TP53 | ENSG00000141510 | tumor protein p53 Source HGNC Symbol Acc HGNC 11998 |
| G12 | UPFH0134182 | ENST00000553625.5 | YY1 | ENSG00000100811 | YY1 transcription factor Source HGNC Symbol Acc HGNC 12856 |
| 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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water | 205410 |
| QuantiNova Probe RT-PCR Kit (100)* | For 100 x 20 µl reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 µl QuantiNova Probe RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water | 208352 |
| QuantiNova Probe PCR Kit (100)* | For 100 x 20 µl reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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 or can be requested from QIAGEN Technical Services or your local distributor.