

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

Human TNF Signaling Pathway

Cat. no. 249950 SBHS-063ZA

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System Handbook at www.qiagen.com for further details.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| A | AGFG1 | ARHGDI8 | BAG4 | CAD | CASP2 | CASP3 | CASP8 | CD27 | CD40 | CD40LG | CD70 | CHUK |
| B | CRADD | DFFA | DUSP1 | EDA2R | FADD | FAS | FASLG | ELP1 | IKKBK | IKBKG | JUN | LMNA |
| C | LMNB1 | LMNB2 | LTA | LTB | LTBR | MADD | MAP2K4 | MAP3K1 | MAP3K7 | MAPK8 | NFKB1 | NFKBIA |
| D | NGFR | PAK1 | PAK2 | PARP1 | PGLYRP1 | PRKDC | PSMG2 | RB1 | RELT | SPTAN1 | TNF | TNFAIP3 |
| E | TNFRSF10A | TNFRSF10B | TNFRSF10C | TNFRSF10D | TNFRSF11A | TNFRSF11B | TNFRSF12A | TNFRSF13B | TNFRSF13C | TNFRSF14 | TNFRSF17 | TNFRSF18 |
| F | TNFRSF19 | TNFRSF1A | TNFRSF1B | TNFRSF21 | TNFRSF25 | TNFRSF4 | TNFRSF6B | TNFRSF8 | TNFRSF9 | TNFSF10 | TNFSF11 | TNFSF12 |
| G | TNFSF13 | TNFSF13B | TNFSF14 | TNFSF15 | TNFSF18 | TNFSF4 | TNFSF8 | TNFSF9 | TRADD | TRAF1 | TRAF2 | TRAF3 |
| H | ACTB | B2M | GAPDH | HPRT1 | RPLP0 | HGDC | QIC | QIC | QIC | PPC | PPC | PPC |

Gene table: QuantiNova LNA PCR Focus Panel

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|---------|-----------------|---|
| A01 | SBH0305301 | ENST0000031078.12 | AGFG1 | ENSG00000173744 | ArfGAP with FG repeats 1 Source HGNC Symbol Acc HGNC 5175 |
| A02 | SBH0074394 | ENST00000228945.9 | ARHGDIB | ENSG00000111348 | Rho GDP dissociation inhibitor beta Source HGNC Symbol Acc HGNC 679 |
| A03 | SBH0608711 | ENST00000432471.6 | BAG4 | ENSG00000156735 | BCL2 associated athanogene 4 Source HGNC Symbol Acc HGNC 940 |
| A04 | SBH0040523 | ENST00000491891.1 | CAD | ENSG00000084774 | carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase Source HGNC Symbol Acc HGNC 1424 |
| A05 | SBH0250948 | ENST00000310447.10 | CASP2 | ENSG00000106144 | caspase 2 Source HGNC Symbol Acc HGNC 1503 |
| A06 | SBH1219824 | ENST00000308394.9 | CASP3 | ENSG00000164305 | caspase 3 Source HGNC Symbol Acc HGNC 1504 |
| A07 | SBH0075404 | ENST00000358485.8 | CASP8 | ENSG00000064012 | caspase 8 Source HGNC Symbol Acc HGNC 1509 |
| A08 | SBH1219859 | ENST00000266557.3 | CD27 | ENSG00000139193 | CD27 molecule Source HGNC Symbol Acc HGNC 11922 |
| A09 | SBH1219861 | ENST00000372285.7 | CD40 | ENSG00000101017 | CD40 molecule Source HGNC Symbol Acc HGNC 11919 |
| A10 | SBH1219862 | ENST00000370629.6 | CD40LG | ENSG00000102245 | CD40 ligand Source HGNC Symbol Acc HGNC 11935 |
| A11 | SBH1219863 | ENST00000245903.4 | CD70 | ENSG00000125726 | CD70 molecule Source NCBI gene Acc 970 |
| A12 | SBH1219887 | ENST00000370397.8 | CHUK | ENSG00000213341 | conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974 |
| B01 | SBH1219911 | ENST00000552983.5 | CRADD | ENSG00000169372 | CASP2 and RIPK1 domain containing adaptor with death domain Source HGNC Symbol Acc HGNC 2340 |
| B02 | SBH1219946 | ENST00000377036.2 | DFFA | ENSG00000160049 | DNA fragmentation factor subunit alpha Source HGNC Symbol Acc HGNC 2772 |
| B03 | SBH1219962 | ENST00000239223.4 | DUSP1 | ENSG00000120129 | dual specificity phosphatase 1 Source HGNC Symbol Acc HGNC 3064 |
| B04 | SBH0609041 | ENST00000451436.6 | EDA2R | ENSG00000131080 | ectodysplasin A2 receptor Source HGNC Symbol Acc HGNC 17756 |
| B05 | SBH0294674 | ENST00000301838.4 | FADD | ENSG00000168040 | Fas associated via death domain Source HGNC Symbol Acc HGNC 3573 |
| B06 | SBH1219994 | ENST00000652046.1 | FAS | ENSG00000026103 | Fas cell surface death receptor Source HGNC Symbol Acc HGNC 11920 |
| B07 | SBH1219995 | ENST00000367721.3 | FASLG | ENSG00000117560 | Fas ligand Source HGNC Symbol Acc HGNC 11936 |
| B08 | SBH0150513 | ENST00000467959.1 | ELP1 | ENSG00000070061 | elongator complex protein 1 Source HGNC Symbol Acc HGNC 5959 |
| B09 | SBH0241248 | ENST00000520810.6 | IKKBK | ENSG00000104365 | inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960 |
| B10 | SBH0411490 | ENST00000422680.5 | IKBK | ENSG00000269335 | inhibitor of nuclear factor kappa B kinase subunit gamma Source HGNC Symbol Acc HGNC 5961 |
| B11 | SBH0613340 | ENST00000371222.3 | JUN | ENSG00000177606 | Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204 |
| B12 | SBH0543296 | ENST00000368299.7 | LMNA | ENSG00000160789 | lamin A/C Source HGNC Symbol Acc HGNC 6636 |
| C01 | SBH0405376 | ENST00000261366.10 | LMNB1 | ENSG00000113368 | lamin B1 Source HGNC Symbol Acc HGNC 6637 |
| C02 | SBH0329533 | ENST00000532465.1 | LMNB2 | ENSG00000176619 | lamin B2 Source HGNC Symbol Acc HGNC 6638 |
| C03 | SBH0249281 | ENST00000418386.2 | LTA | ENSG00000226979 | lymphotoxin alpha Source HGNC Symbol Acc HGNC 6709 |
| C04 | SBH1220578 | ENST00000429299.2 | LTB | ENSG00000227507 | lymphotoxin beta Source HGNC Symbol Acc HGNC 6711 |
| C05 | SBH1220181 | ENST00000228918.9 | LTBR | ENSG00000111321 | lymphotoxin beta receptor Source HGNC Symbol Acc HGNC 6718 |
| C06 | SBH0164256 | ENST00000349238.7 | MADD | ENSG00000110514 | MAP kinase activating death domain Source HGNC Symbol Acc HGNC 6766 |
| C07 | SBH1220189 | ENST00000353533.10 | MAP2K4 | ENSG00000065559 | mitogen-activated protein kinase kinase 4 Source HGNC Symbol Acc HGNC 6844 |
| C08 | SBH1220190 | ENST00000399503.4 | MAP3K1 | ENSG00000095015 | mitogen-activated protein kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6848 |
| C09 | SBH1220191 | ENST00000369329.8 | MAP3K7 | ENSG00000135341 | mitogen-activated protein kinase kinase kinase 7 Source HGNC Symbol Acc HGNC 6859 |
| C10 | SBH0294318 | ENST00000395611.7 | MAPK8 | ENSG00000107643 | mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881 |
| | | ENST00000651 | | ENSG000000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|-----------|-----------------|---|
| C11 | SBH1220264 | 197.1 | NFKB1 | 109320 | nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794 |
| C12 | SBH0552847 | ENST00000216797.9 | NFKBIA | ENSG00000100906 | NFKB inhibitor alpha Source HGNC Symbol Acc HGNC 7797 |
| D01 | SBH0556664 | ENST00000504201.1 | NGFR | ENSG00000064300 | nerve growth factor receptor Source HGNC Symbol Acc HGNC 7809 |
| D02 | SBH0221748 | ENST00000356341.7 | PAK1 | ENSG00000149269 | p21 (RAC1) activated kinase 1 Source HGNC Symbol Acc HGNC 8590 |
| D03 | SBH0516046 | ENST00000426668.1 | PAK2 | ENSG00000180370 | p21 (RAC1) activated kinase 2 Source HGNC Symbol Acc HGNC 8591 |
| D04 | SBH1220289 | ENST00000366794.10 | PARP1 | ENSG00000143799 | poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270 |
| D05 | SBH0401292 | ENST00000008938.5 | PGLYRP1 | ENSG00000008438 | peptidoglycan recognition protein 1 Source HGNC Symbol Acc HGNC 8904 |
| D06 | SBH0182228 | ENST00000314191.6 | PRKDC | ENSG00000253729 | protein kinase, DNA-activated, catalytic subunit Source HGNC Symbol Acc HGNC 9413 |
| D07 | SBH0043101 | ENST00000317615.11 | PSMG2 | ENSG00000128789 | proteasome assembly chaperone 2 Source HGNC Symbol Acc HGNC 24929 |
| D08 | SBH0093533 | ENST00000267163.5 | RB1 | ENSG00000139687 | RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884 |
| D09 | SBH0010376 | ENST00000544075.5 | RELT | ENSG00000054967 | RELT, TNF receptor Source HGNC Symbol Acc HGNC 13764 |
| D10 | SBH0247589 | ENST00000630804.2 | SPTAN1 | ENSG00000197694 | spectrin alpha, non-erythrocytic 1 Source HGNC Symbol Acc HGNC 11273 |
| D11 | SBH1220471 | ENST00000449264.3 | TNF | ENSG00000232810 | tumor necrosis factor Source HGNC Symbol Acc HGNC 11892 |
| D12 | SBH0348756 | ENST00000614035.4 | TNFAIP3 | ENSG00000118503 | TNF alpha induced protein 3 Source HGNC Symbol Acc HGNC 11896 |
| E01 | SBH1220472 | ENST00000221132.7 | TNFRSF10A | ENSG00000104689 | TNF receptor superfamily member 10a Source HGNC Symbol Acc HGNC 11904 |
| E02 | SBH1220473 | ENST00000347739.3 | TNFRSF10B | ENSG00000120889 | TNF receptor superfamily member 10b Source HGNC Symbol Acc HGNC 11905 |
| E03 | SBH0394080 | ENST00000518135.1 | TNFRSF10C | ENSG00000173535 | TNF receptor superfamily member 10c Source HGNC Symbol Acc HGNC 11906 |
| E04 | SBH0393775 | ENST00000312584.4 | TNFRSF10D | ENSG00000173530 | TNF receptor superfamily member 10d Source HGNC Symbol Acc HGNC 11907 |
| E05 | SBH0198097 | ENST00000639222.1 | TNFRSF11A | ENSG00000141655 | TNF receptor superfamily member 11a Source HGNC Symbol Acc HGNC 11908 |
| E06 | SBH1220474 | ENST00000297350.9 | TNFRSF11B | ENSG00000164761 | TNF receptor superfamily member 11b Source HGNC Symbol Acc HGNC 11909 |
| E07 | SBH0222622 | ENST00000573001.5 | TNFRSF12A | ENSG00000006327 | TNF receptor superfamily member 12A Source HGNC Symbol Acc HGNC 18152 |
| E08 | SBH0417784 | ENST00000583789.1 | TNFRSF13B | ENSG00000240505 | TNF receptor superfamily member 13B Source HGNC Symbol Acc HGNC 18153 |
| E09 | SBH0314498 | ENST00000291232.4 | TNFRSF13C | ENSG00000159958 | TNF receptor superfamily member 13C Source HGNC Symbol Acc HGNC 17755 |
| E10 | SBH0472908 | ENST00000435221.6 | TNFRSF14 | ENSG00000157873 | TNF receptor superfamily member 14 Source HGNC Symbol Acc HGNC 11912 |
| E11 | SBH0089303 | ENST00000396495.3 | TNFRSF17 | ENSG00000048462 | TNF receptor superfamily member 17 Source HGNC Symbol Acc HGNC 11913 |
| E12 | SBH0054416 | ENST00000486728.5 | TNFRSF18 | ENSG00000186891 | TNF receptor superfamily member 18 Source HGNC Symbol Acc HGNC 11914 |
| F01 | SBH0135218 | ENST00000382263.3 | TNFRSF19 | ENSG00000127863 | TNF receptor superfamily member 19 Source HGNC Symbol Acc HGNC 11915 |
| F02 | SBH0080951 | ENST00000162749.6 | TNFRSF1A | ENSG00000067182 | TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916 |
| F03 | SBH1220475 | ENST00000536782.2 | TNFRSF1B | ENSG00000028137 | TNF receptor superfamily member 1B Source HGNC Symbol Acc HGNC 11917 |
| F04 | SBH0062778 | ENST00000296861.2 | TNFRSF21 | ENSG00000146072 | TNF receptor superfamily member 21 Source HGNC Symbol Acc HGNC 13469 |
| F05 | SBH0554154 | ENST00000377782.7 | TNFRSF25 | ENSG00000215788 | TNF receptor superfamily member 25 Source HGNC Symbol Acc HGNC 11910 |
| F06 | SBH0433585 | ENST00000453580.1 | TNFRSF4 | ENSG00000186827 | TNF receptor superfamily member 4 Source HGNC Symbol Acc HGNC 11918 |
| F07 | SBH0182905 | ENST00000369996.3 | TNFRSF6B | ENSG00000243509 | TNF receptor superfamily member 6b Source HGNC Symbol Acc HGNC 11921 |
| F08 | SBH0035846 | ENST00000417814.3 | TNFRSF8 | ENSG00000120949 | TNF receptor superfamily member 8 Source HGNC Symbol Acc HGNC 11923 |
| F09 | SBH1220476 | ENST00000377507.7 | TNFRSF9 | ENSG00000049249 | TNF receptor superfamily member 9 Source HGNC Symbol Acc HGNC 11924 |
| F10 | SBH1220477 | ENST00000241261.7 | TNFSF10 | ENSG00000121858 | TNF superfamily member 10 Source HGNC Symbol Acc HGNC 11925 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|----------|-----------------|--|
| F11 | SBH1220478 | ENST00000239849.8 | TNFSF11 | ENSG00000120659 | TNF superfamily member 11 Source HGNC Symbol Acc HGNC 11926 |
| F12 | SBH0415653 | ENST00000322272.11 | TNFSF12 | ENSG00000239697 | TNF superfamily member 12 Source HGNC Symbol Acc HGNC 11927 |
| G01 | SBH1220479 | ENST00000436057.5 | TNFSF13 | ENSG00000161955 | TNF superfamily member 13 Source HGNC Symbol Acc HGNC 11928 |
| G02 | SBH0113173 | ENST00000375887.8 | TNFSF13B | ENSG00000102524 | TNF superfamily member 13b Source HGNC Symbol Acc HGNC 11929 |
| G03 | SBH1220480 | ENST00000599359.1 | TNFSF14 | ENSG00000125735 | TNF superfamily member 14 Source HGNC Symbol Acc HGNC 11930 |
| G04 | SBH0334858 | ENST00000374044.1 | TNFSF15 | ENSG00000181634 | TNF superfamily member 15 Source HGNC Symbol Acc HGNC 11931 |
| G05 | SBH0167727 | ENST00000404377.3 | TNFSF18 | ENSG00000120337 | TNF superfamily member 18 Source HGNC Symbol Acc HGNC 11932 |
| G06 | SBH1220481 | ENST00000367718.5 | TNFSF4 | ENSG00000117586 | TNF superfamily member 4 Source HGNC Symbol Acc HGNC 11934 |
| G07 | SBH0593682 | ENST00000223795.2 | TNFSF8 | ENSG00000106952 | TNF superfamily member 8 Source HGNC Symbol Acc HGNC 11938 |
| G08 | SBH0289263 | ENST00000245817.5 | TNFSF9 | ENSG00000125657 | TNF superfamily member 9 Source HGNC Symbol Acc HGNC 11939 |
| G09 | SBH1220491 | ENST00000345057.9 | TRADD | ENSG00000102871 | TNFRSF1A associated via death domain Source HGNC Symbol Acc HGNC 12030 |
| G10 | SBH0061182 | ENST00000373887.8 | TRAF1 | ENSG00000056558 | TNF receptor associated factor 1 Source HGNC Symbol Acc HGNC 12031 |
| G11 | SBH1220492 | ENST00000247668.7 | TRAF2 | ENSG00000127191 | TNF receptor associated factor 2 Source HGNC Symbol Acc HGNC 12032 |
| G12 | SBH0271159 | ENST00000560371.5 | TRAF3 | ENSG00000131323 | TNF receptor associated factor 3 Source HGNC Symbol Acc HGNC 12033 |
| H01 | SBH1220543 | ENST00000646664.1 | ACTB | ENSG00000075624 | actin beta Source HGNC Symbol Acc HGNC 132 |
| H02 | SBH1220550 | ENST00000558401.6 | B2M | ENSG00000166710 | beta-2-microglobulin Source HGNC Symbol Acc HGNC 914 |
| H03 | SBH1220545 | ENST00000396861.5 | GAPDH | ENSG00000111640 | glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141 |
| H04 | SBH1220546 | ENST00000298556.8 | HPRT1 | ENSG00000165704 | hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157 |
| H05 | SBH1220553 | ENST00000546989.5 | RPLP0 | ENSG00000089157 | ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371 |
| H06 | SBH1218553 | Sybr_HGDC | HGDC | Sybr_HGDC | Human Genomic DNA Contamination |
| H07 | SBH1218551 | Sybr_QIC | QIC | Sybr_QIC | QuantiNova Internal Control |
| H08 | SBH1218551 | Sybr_QIC | QIC | Sybr_QIC | QuantiNova Internal Control |
| H09 | SBH1218551 | Sybr_QIC | QIC | Sybr_QIC | QuantiNova Internal Control |
| H10 | SBH1218550 | Sybr_PPC | PPC | Sybr_PPC | Positive PCR Control |
| H11 | SBH1218550 | Sybr_PPC | PPC | Sybr_PPC | Positive PCR Control |
| H12 | SBH1218550 | Sybr_PPC | PPC | Sybr_PPC | Positive PCR Control |



Related products

| Product | Contents | Cat. no. |
|--|--|----------|
| QuantiNova LNA PCR QC Panel | These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats | 249940 |
| QuantiNova Reverse Transcription Kit (10)* | For 10 x 20 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water | 205410 |
| QuantiNova SYBR Green RT-PCR Kit (100)* | For 100 x 20 μ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 μ l QuantiNova SYBR Green RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water | 208152 |
| QuantiNova SYBR Green PCR Kit (100)* | For 100 x 20 μ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ l QN ROX Reference Dye, 1.9 ml Water | 208052 |

*Larger kit sizes available.

The QuantiNova LNA PCR Focus Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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