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

# Human Antiviral Response

## Cat. no. 249950 SBHS-122ZA

## 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 | AIM2 | APOBEC3G | ATG5 | AZI2 | CARD9 | CASP1 | CASP10 | CASP8 | CCL3 | CCL5 | CD40 | CD80 |
| B | CD86 | CHUK | CTSB | CTSL | CTSS | CXCL10 | CXCL11 | CXCL9 | CYLD | TKFC | DDX3X | DDX58 |
| C | DHX58 | FADD | FOS | HSP90AA1 | IFIH1 | IFNA1 | IFNA2 | IFNAR1 | IFNB1 | IKBKB | IL12A | IL12B |
| D | IL15 | IL18 | IL1B | IL6 | CXCL8 | IRAK1 | IRF3 | IRF5 | IRF7 | ISG15 | JUN | MAP2K1 |
| E | MAP2K3 | MAP3K1 | MAP3K7 | MAPK1 | MAPK14 | MAPK3 | MAPK8 | MAVS | MEFV | MX1 | MYD88 | NFKB1 |
| F | NFKBIA | NLRP3 | NOD2 | OAS2 | PIN1 | PSTPIP1 | PYCARD | PYDC1 | RELA | RIPK1 | SPP1 | STAT1 |
| G | SUGT1 | TBK1 | TICAM1 | TLR3 | TLR7 | TLR8 | TLR9 | TNF | TRADD | TRAF3 | TRAF6 | TRIM25 |
| 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 | SBH1219731 | ENST00000368130.9 | AIM2 | ENSG00000163568 | absent in melanoma 2 Source HGNC Symbol Acc HGNC 357 |
| A02 | SBH1219748 | ENST00000407997.4 | APOBEC3G | ENSG00000239713 | apolipoprotein B mRNA editing enzyme catalytic subunit 3G Source HGNC Symbol Acc HGNC 17357 |
| A03 | SBH1219760 | ENST00000636437.1 | ATG5 | ENSG00000057663 | autophagy related 5 Source HGNC Symbol Acc HGNC 589 |
| A04 | SBH1219778 | ENST00000334100.10 | AZI2 | ENSG00000163512 | 5-azacytidine induced 2 Source HGNC Symbol Acc HGNC 24002 |
| A05 | SBH1219822 | ENST00000371732.9 | CARD9 | ENSG00000187796 | caspase recruitment domain family member 9 Source HGNC Symbol Acc HGNC 16391 |
| A06 | SBH0054226 | ENST00000526568.5 | CASP1 | ENSG00000137752 | caspase 1 Source HGNC Symbol Acc HGNC 1499 |
| A07 | SBH1219823 | ENST00000286186.10 | CASP10 | ENSG00000003400 | caspase 10 Source HGNC Symbol Acc HGNC 1500 |
| A08 | SBH0075404 | ENST00000358485.8 | CASP8 | ENSG00000064012 | caspase 8 Source HGNC Symbol Acc HGNC 1509 |
| A09 | SBH1219838 | ENST00000613922.2 | CCL3 | ENSG00000277632 | C-C motif chemokine ligand 3 Source HGNC Symbol Acc HGNC 10627 |
| A10 | SBH1219840 | ENST00000603197.6 | CCL5 | ENSG00000271503 | C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632 |
| A11 | SBH1219861 | ENST00000372285.7 | CD40 | ENSG00000101017 | CD40 molecule Source HGNC Symbol Acc HGNC 11919 |
| A12 | SBH1219864 | ENST00000264246.8 | CD80 | ENSG00000121594 | CD80 molecule Source HGNC Symbol Acc HGNC 1700 |
| B01 | SBH0280451 | ENST00000393627.6 | CD86 | ENSG00000114013 | CD86 molecule Source HGNC Symbol Acc HGNC 1705 |
| B02 | SBH1219887 | ENST00000370397.8 | CHUK | ENSG00000213341 | conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974 |
| B03 | SBH1219921 | ENST00000534510.5 | CTSB | ENSG00000164733 | cathepsin B Source HGNC Symbol Acc HGNC 2527 |
| B04 | SBH0633657 | ENST00000340342.10 | CTSL | ENSG00000135047 | cathepsin L Source HGNC Symbol Acc HGNC 2537 |
| B05 | SBH1219923 | ENST00000448301.6 | CTSS | ENSG00000163131 | cathepsin S Source HGNC Symbol Acc HGNC 2545 |
| B06 | SBH1219927 | ENST00000306602.3 | CXCL10 | ENSG00000169245 | C-X-C motif chemokine ligand 10 Source HGNC Symbol Acc HGNC 10637 |
| B07 | SBH0419056 | ENST00000306621.7 | CXCL11 | ENSG00000169248 | C-X-C motif chemokine ligand 11 Source HGNC Symbol Acc HGNC 10638 |
| B08 | SBH0383348 | ENST00000264888.5 | CXCL9 | ENSG00000138755 | C-X-C motif chemokine ligand 9 Source HGNC Symbol Acc HGNC 7098 |
| B09 | SBH0059638 | ENST00000311559.13 | CYLD | ENSG00000083799 | CYLD lysine 63 deubiquitinase Source HGNC Symbol Acc HGNC 2584 |
| B10 | SBH1220457 | ENST00000394900.7 | TKFC | ENSG00000149476 | triokinase and FMN cyclase Source HGNC Symbol Acc HGNC 24552 |
| B11 | SBH1219943 | ENST00000644513.1 | DDX3X | ENSG00000215301 | DEAD-box helicase 3 X-linked Source HGNC Symbol Acc HGNC 2745 |
| B12 | SBH1219944 | ENST00000379883.3 | DDX58 | ENSG00000107201 | DExD/H-box helicase 58 Source HGNC Symbol Acc HGNC 19102 |
| C01 | SBH1219948 | ENST00000251642.8 | DHX58 | ENSG00000108771 | DExH-box helicase 58 Source HGNC Symbol Acc HGNC 29517 |
| C02 | SBH0294674 | ENST00000301838.4 | FADD | ENSG00000168040 | Fas associated via death domain Source HGNC Symbol Acc HGNC 3573 |
| C03 | SBH1220004 | ENST00000554617.1 | FOS | ENSG00000170345 | Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796 |
| C04 | SBH0323386 | ENST00000334701.11 | HSP90AA1 | ENSG00000080824 | heat shock protein 90 alpha family class A member 1 Source HGNC Symbol Acc HGNC 5253 |
| C05 | SBH1220081 | ENST00000263642.2 | IFIH1 | ENSG00000115267 | interferon induced with helicase C domain 1 Source HGNC Symbol Acc HGNC 18873 |
| C06 | SBH0388912 | ENST00000276927.2 | IFNA1 | ENSG00000197919 | interferon alpha 1 Source HGNC Symbol Acc HGNC 5417 |
| C07 | SBH0359836 | ENST00000380206.3 | IFNA2 | ENSG00000188379 | interferon alpha 2 Source HGNC Symbol Acc HGNC 5423 |
| C08 | SBH1220087 | ENST00000442071.2 | IFNAR1 | ENSG00000142166 | interferon alpha and beta receptor subunit 1 Source HGNC Symbol Acc HGNC 5432 |
| C09 | SBH1220089 | ENST00000380232.4 | IFNB1 | ENSG00000171855 | interferon beta 1 Source HGNC Symbol Acc HGNC 5434 |
| C10 | SBH0241248 | ENST00000520810.6 | IKBKB | ENSG00000104365 | inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960 |
| | | ENST00000305 | | ENSG00000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| C11 | SBH1220098 | 579.7 | IL12A | 168811 | interleukin 12A Source HGNC Symbol Acc HGNC 5969 |
| C12 | SBH1220099 | ENST00000231228.2 | IL12B | ENSG00000113302 | interleukin 12B Source HGNC Symbol Acc HGNC 5970 |
| D01 | SBH1220101 | ENST00000296545.11 | IL15 | ENSG00000164136 | interleukin 15 Source HGNC Symbol Acc HGNC 5977 |
| D02 | SBH1220103 | ENST00000524595.5 | IL18 | ENSG00000150782 | interleukin 18 Source HGNC Symbol Acc HGNC 5986 |
| D03 | SBH0079231 | ENST00000263341.6 | IL1B | ENSG00000125538 | interleukin 1 beta Source HGNC Symbol Acc HGNC 5992 |
| D04 | SBH1220111 | ENST00000401630.7 | IL6 | ENSG00000136244 | interleukin 6 Source HGNC Symbol Acc HGNC 6018 |
| D05 | SBH1219932 | ENST00000401931.1 | CXCL8 | ENSG00000169429 | C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025 |
| D06 | SBH1220119 | ENST00000393687.6 | IRAK1 | ENSG00000184216 | interleukin 1 receptor associated kinase 1 Source HGNC Symbol Acc HGNC 6112 |
| D07 | SBH1220124 | ENST00000601809.5 | IRF3 | ENSG00000126456 | interferon regulatory factor 3 Source HGNC Symbol Acc HGNC 6118 |
| D08 | SBH1220125 | ENST00000357234.10 | IRF5 | ENSG00000128604 | interferon regulatory factor 5 Source HGNC Symbol Acc HGNC 6120 |
| D09 | SBH0251148 | ENST00000397574.7 | IRF7 | ENSG00000185507 | interferon regulatory factor 7 Source HGNC Symbol Acc HGNC 6122 |
| D10 | SBH0407556 | ENST00000649529.1 | ISG15 | ENSG00000187608 | ISG15 ubiquitin-like modifier Source HGNC Symbol Acc HGNC 4053 |
| D11 | SBH0613340 | ENST00000371222.3 | JUN | ENSG00000177606 | Jun proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 6204 |
| D12 | SBH0671782 | ENST00000307102.9 | MAP2K1 | ENSG00000169032 | mitogen-activated protein kinase kinase 1 Source HGNC Symbol Acc HGNC 6840 |
| E01 | SBH1220188 | ENST00000613338.4 | MAP2K3 | ENSG00000034152 | mitogen-activated protein kinase kinase 3 Source HGNC Symbol Acc HGNC 6843 |
| E02 | SBH1220190 | ENST00000399503.4 | MAP3K1 | ENSG00000095015 | mitogen-activated protein kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6848 |
| E03 | SBH1220191 | ENST00000369329.8 | MAP3K7 | ENSG00000135341 | mitogen-activated protein kinase kinase kinase 7 Source HGNC Symbol Acc HGNC 6859 |
| E04 | SBH1220192 | ENST00000544786.1 | MAPK1 | ENSG00000100030 | mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6871 |
| E05 | SBH0102441 | ENST00000229795.7 | MAPK14 | ENSG00000112062 | mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876 |
| E06 | SBH1220194 | ENST00000478356.5 | MAPK3 | ENSG00000102882 | mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877 |
| E07 | SBH0294318 | ENST00000395611.7 | MAPK8 | ENSG00000107643 | mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881 |
| E08 | SBH1220195 | ENST00000428216.4 | MAVS | ENSG00000088888 | mitochondrial antiviral signaling protein Source HGNC Symbol Acc HGNC 29233 |
| E09 | SBH1220209 | ENST00000219596.5 | MEFV | ENSG00000103313 | MEFV, pyrin innate immunity regulator Source HGNC Symbol Acc HGNC 6998 |
| E10 | SBH1220232 | ENST00000288383.10 | MX1 | ENSG00000157601 | MX dynamin like GTPase 1 Source HGNC Symbol Acc HGNC 7532 |
| E11 | SBH0303234 | ENST00000648963.1 | MYD88 | ENSG00000172936 | MYD88, innate immune signal transduction adaptor Source HGNC Symbol Acc HGNC 7562 |
| E12 | SBH1220264 | ENST00000651197.1 | NFKB1 | ENSG00000109320 | nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794 |
| F01 | SBH0552847 | ENST00000216797.9 | NFKBIA | ENSG00000100906 | NFKB inhibitor alpha Source HGNC Symbol Acc HGNC 7797 |
| F02 | SBH1220270 | ENST00000391828.7 | NLRP3 | ENSG00000162711 | NLR family pyrin domain containing 3 Source HGNC Symbol Acc HGNC 16400 |
| F03 | SBH0193609 | ENST00000300589.6 | NOD2 | ENSG00000167207 | nucleotide binding oligomerization domain containing 2 Source HGNC Symbol Acc HGNC 5331 |
| F04 | SBH0544779 | ENST00000392583.6 | OAS2 | ENSG00000111335 | 2 -5 -oligoadenylate synthetase 2 Source HGNC Symbol Acc HGNC 8087 |
| F05 | SBH0214152 | ENST00000380889.6 | PIN1 | ENSG00000127445 | peptidylprolyl cis/trans isomerase, NIMA-interacting 1 Source HGNC Symbol Acc HGNC 8988 |
| F06 | SBH0650439 | ENST00000558012.5 | PSTPIP1 | ENSG00000140368 | proline-serine-threonine phosphatase interacting protein 1 Source HGNC Symbol Acc HGNC 9580 |
| F07 | SBH1220348 | ENST00000247470.10 | PYCARD | ENSG00000103490 | PYD and CARD domain containing Source HGNC Symbol Acc HGNC 16608 |
| F08 | SBH0344194 | ENST00000568383.5 | PYDC1 | ENSG00000169900 | pyrin domain containing 1 Source HGNC Symbol Acc HGNC 30261 |
| F09 | SBH1220363 | ENST00000532999.5 | RELA | ENSG00000173039 | RELA proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9955 |
| F10 | SBH1220369 | ENST00000259808.9 | RIPK1 | ENSG00000137275 | receptor interacting serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 10019 |
| | | | | | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| F11 | SBH0180162 | ENST00000237623.11 | SPP1 | ENSG00000118785 | secreted phosphoprotein 1 Source HGNC Symbol Acc HGNC 11255 |
| F12 | SBH0333289 | ENST00000361099.7 | STAT1 | ENSG00000115415 | signal transducer and activator of transcription 1 Source HGNC Symbol Acc HGNC 11362 |
| G01 | SBH1220429 | ENST00000310528.8 | SUGT1 | ENSG00000165416 | SGT1 homolog, MIS12 kinetochore complex assembly cochaperone Source HGNC Symbol Acc HGNC 16987 |
| G02 | SBH1220433 | ENST00000652657.1 | TBK1 | ENSG00000183735 | TANK binding kinase 1 Source HGNC Symbol Acc HGNC 11584 |
| G03 | SBH1220451 | ENST00000248244.5 | TICAM1 | ENSG00000127666 | toll like receptor adaptor molecule 1 Source NCBI gene Acc 148022 |
| G04 | SBH1220462 | ENST00000513189.1 | TLR3 | ENSG00000164342 | toll like receptor 3 Source HGNC Symbol Acc HGNC 11849 |
| G05 | SBH1220465 | ENST00000380659.4 | TLR7 | ENSG00000196664 | toll like receptor 7 Source HGNC Symbol Acc HGNC 15631 |
| G06 | SBH0265788 | ENST00000218032.6 | TLR8 | ENSG00000101916 | toll like receptor 8 Source HGNC Symbol Acc HGNC 15632 |
| G07 | SBH1220466 | ENST00000360658.2 | TLR9 | ENSG00000239732 | toll like receptor 9 Source HGNC Symbol Acc HGNC 15633 |
| G08 | SBH1220471 | ENST00000449264.3 | TNF | ENSG00000232810 | tumor necrosis factor Source HGNC Symbol Acc HGNC 11892 |
| G09 | SBH1220491 | ENST00000345057.9 | TRADD | ENSG00000102871 | TNFRSF1A associated via death domain Source HGNC Symbol Acc HGNC 12030 |
| G10 | SBH0271159 | ENST00000560371.5 | TRAF3 | ENSG00000131323 | TNF receptor associated factor 3 Source HGNC Symbol Acc HGNC 12033 |
| G11 | SBH1220493 | ENST00000526995.6 | TRAF6 | ENSG00000175104 | TNF receptor associated factor 6 Source HGNC Symbol Acc HGNC 12036 |
| G12 | SBH1220494 | ENST00000316881.9 | TRIM25 | ENSG00000121060 | tripartite motif containing 25 Source HGNC Symbol Acc HGNC 12932 |
| 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 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 SYBR Green RT-PCR Kit (100)* | For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water | 208152 |
| QuantiNova SYBR Green PCR Kit (100)* | For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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.

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.