

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

Human Cell Cycle

Cat. no. 249950 SBHS-020ZA

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 | ABL1 | ANAPC2 | ATM | ATR | AURKA | AURKB | BCCIP | BCL2 | BIRC5 | BRCA1 | BRCA2 | CASP3 |
| B | CCNA2 | CCNB1 | CCNB2 | CCNC | CCND1 | CCND2 | CCND3 | CCNE1 | CCNF | CCNG1 | CCNG2 | CCNH |
| C | CCNT1 | CDC16 | CDC20 | CDC25A | CDC25C | CDC34 | CDC6 | CDK1 | CDK2 | CDK4 | CDK5R1 | CDK5RAP1 |
| D | CDK6 | CDK7 | CDK8 | CDKN1A | CDKN1B | CDKN2A | CDKN2B | CDKN3 | CHEK1 | CHEK2 | CKS1B | CKS2 |
| E | CUL1 | CUL2 | CUL3 | E2F1 | E2F4 | GADD45A | GTSE1 | HUS1 | KNTC1 | KPNA2 | MAD2L1 | MAD2L2 |
| F | MCM2 | MCM3 | MCM4 | MCM5 | MDM2 | MKI67 | MINAT1 | MRE11 | NBN | RAD1 | RAD17 | RAD51 |
| G | RAD9A | RB1 | RBBP8 | RBL1 | RBL2 | SERTAD1 | SKP2 | STMN1 | TFDP1 | TFDP2 | TP53 | WEE1 |
| 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 | SBH1219716 | ENST00000372348.6 | ABL1 | ENSG00000097007 | ABL proto-oncogene 1, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 76 |
| A02 | SBH0614380 | ENST00000495611.1 | ANAPC2 | ENSG00000176248 | anaphase promoting complex subunit 2 Source HGNC Symbol Acc HGNC 19989 |
| A03 | SBH1219763 | ENST00000452508.6 | ATM | ENSG00000149311 | ATM serine/threonine kinase Source HGNC Symbol Acc HGNC 795 |
| A04 | SBH1219775 | ENST00000350721.9 | ATR | ENSG00000175054 | ATR serine/threonine kinase Source HGNC Symbol Acc HGNC 882 |
| A05 | SBH0360632 | ENST00000441357.5 | AURKA | ENSG00000087586 | aurora kinase A Source HGNC Symbol Acc HGNC 11393 |
| A06 | SBH0250324 | ENST00000580998.5 | AURKB | ENSG00000178999 | aurora kinase B Source HGNC Symbol Acc HGNC 11390 |
| A07 | SBH0314938 | ENST00000299130.7 | BCCIP | ENSG00000107949 | BRCA2 and CDKN1A interacting protein Source HGNC Symbol Acc HGNC 978 |
| A08 | SBH1219786 | ENST00000398117.1 | BCL2 | ENSG00000171791 | BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990 |
| A09 | SBH1219797 | ENST00000301633.8 | BIRC5 | ENSG00000089685 | baculoviral IAP repeat containing 5 Source HGNC Symbol Acc HGNC 593 |
| A10 | SBH1219814 | ENST00000357654.8 | BRCA1 | ENSG000000102048 | BRCA1, DNA repair associated Source HGNC Symbol Acc HGNC 1100 |
| A11 | SBH1219815 | ENST00000380152.7 | BRCA2 | ENSG00000139618 | BRCA2, DNA repair associated Source HGNC Symbol Acc HGNC 1101 |
| A12 | SBH1219824 | ENST00000308394.9 | CASP3 | ENSG00000164305 | caspase 3 Source HGNC Symbol Acc HGNC 1504 |
| B01 | SBH0652713 | ENST00000274026.10 | CCNA2 | ENSG00000145386 | cyclin A2 Source HGNC Symbol Acc HGNC 1578 |
| B02 | SBH1219842 | ENST00000256442.10 | CCNB1 | ENSG00000134057 | cyclin B1 Source HGNC Symbol Acc HGNC 1579 |
| B03 | SBH1219843 | ENST00000621385.1 | CCNB2 | ENSG00000157456 | cyclin B2 Source HGNC Symbol Acc HGNC 1580 |
| B04 | SBH1219844 | ENST00000524049.5 | CCNC | ENSG00000112237 | cyclin C Source HGNC Symbol Acc HGNC 1581 |
| B05 | SBH0434090 | ENST00000227507.2 | CCND1 | ENSG00000110092 | cyclin D1 Source HGNC Symbol Acc HGNC 1582 |
| B06 | SBH1219845 | ENST00000261254.8 | CCND2 | ENSG00000118971 | cyclin D2 Source HGNC Symbol Acc HGNC 1583 |
| B07 | SBH0542733 | ENST00000372991.8 | CCND3 | ENSG00000112576 | cyclin D3 Source HGNC Symbol Acc HGNC 1585 |
| B08 | SBH1219846 | ENST00000262643.8 | CCNE1 | ENSG00000105173 | cyclin E1 Source HGNC Symbol Acc HGNC 1589 |
| B09 | SBH0035824 | ENST00000564236.1 | CCNF | ENSG00000162063 | cyclin F Source HGNC Symbol Acc HGNC 1591 |
| B10 | SBH1219847 | ENST00000393929.5 | CCNG1 | ENSG00000113328 | cyclin G1 Source HGNC Symbol Acc HGNC 1592 |
| B11 | SBH1219848 | ENST00000512918.5 | CCNG2 | ENSG00000138764 | cyclin G2 Source HGNC Symbol Acc HGNC 1593 |
| B12 | SBH1219849 | ENST00000504878.1 | CCNH | ENSG00000134480 | cyclin H Source HGNC Symbol Acc HGNC 1594 |
| C01 | SBH1219850 | ENST00000261900.8 | CCNT1 | ENSG00000129315 | cyclin T1 Source HGNC Symbol Acc HGNC 1599 |
| C02 | SBH0344781 | ENST00000650489.1 | CDC16 | ENSG00000130177 | cell division cycle 16 Source HGNC Symbol Acc HGNC 1720 |
| C03 | SBH1219865 | ENST00000310955.11 | CDC20 | ENSG00000117399 | cell division cycle 20 Source HGNC Symbol Acc HGNC 1723 |
| C04 | SBH0437013 | ENST00000302506.7 | CDC25A | ENSG00000164045 | cell division cycle 25A Source HGNC Symbol Acc HGNC 1725 |
| C05 | SBH1219866 | ENST00000514017.1 | CDC25C | ENSG00000158402 | cell division cycle 25C Source HGNC Symbol Acc HGNC 1727 |
| C06 | SBH1219867 | ENST00000586283.6 | CDC34 | ENSG00000099804 | cell division cycle 34 Source HGNC Symbol Acc HGNC 1734 |
| C07 | SBH1219868 | ENST00000209728.9 | CDC6 | ENSG00000094804 | cell division cycle 6 Source HGNC Symbol Acc HGNC 1744 |
| C08 | SBH0229893 | ENST00000395284.7 | CDK1 | ENSG00000170312 | cyclin dependent kinase 1 Source HGNC Symbol Acc HGNC 1722 |
| C09 | SBH1219872 | ENST00000553376.5 | CDK2 | ENSG00000123374 | cyclin dependent kinase 2 Source HGNC Symbol Acc HGNC 1771 |
| C10 | SBH1219873 | ENST00000547281.5 | CDK4 | ENSG00000135446 | cyclin dependent kinase 4 Source HGNC Symbol Acc HGNC 1773 |
| | | ENST00000313 | | ENSG000000 | cyclin dependent kinase 5 regulatory subunit 1 Source HGNC Symbol Acc |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|----------|-----------------|---|
| C11 | SBH1219874 | 401.4 | CDK5R1 | 176749 | HGNC 1775 |
| C12 | SBH1219875 | ENST00000357886.8 | CDK5RAP1 | ENSG00000101391 | CDK5 regulatory subunit associated protein 1 Source HGNC Symbol Acc HGNC 15880 |
| D01 | SBH1219876 | ENST00000424848.2 | CDK6 | ENSG00000105810 | cyclin dependent kinase 6 Source HGNC Symbol Acc HGNC 1777 |
| D02 | SBH1219877 | ENST00000256443.8 | CDK7 | ENSG00000134058 | cyclin dependent kinase 7 Source HGNC Symbol Acc HGNC 1778 |
| D03 | SBH1219878 | ENST00000381527.8 | CDK8 | ENSG00000132964 | cyclin dependent kinase 8 Source HGNC Symbol Acc HGNC 1779 |
| D04 | SBH0608500 | ENST00000244741.9 | CDKN1A | ENSG00000124762 | cyclin dependent kinase inhibitor 1A Source HGNC Symbol Acc HGNC 1784 |
| D05 | SBH1219879 | ENST00000442489.1 | CDKN1B | ENSG00000111276 | cyclin dependent kinase inhibitor 1B Source HGNC Symbol Acc HGNC 1785 |
| D06 | SBH0349548 | ENST00000304494.9 | CDKN2A | ENSG00000147889 | cyclin dependent kinase inhibitor 2A Source HGNC Symbol Acc HGNC 1787 |
| D07 | SBH1219880 | ENST00000276925.7 | CDKN2B | ENSG00000147883 | cyclin dependent kinase inhibitor 2B Source HGNC Symbol Acc HGNC 1788 |
| D08 | SBH1219881 | ENST00000458126.6 | CDKN3 | ENSG00000100526 | cyclin dependent kinase inhibitor 3 Source HGNC Symbol Acc HGNC 1791 |
| D09 | SBH1219885 | ENST00000534070.5 | CHEK1 | ENSG00000149554 | checkpoint kinase 1 Source HGNC Symbol Acc HGNC 1925 |
| D10 | SBH0661120 | ENST00000416671.5 | CHEK2 | ENSG00000183765 | checkpoint kinase 2 Source HGNC Symbol Acc HGNC 16627 |
| D11 | SBH1219890 | ENST00000368436.1 | CKS1B | ENSG00000173207 | CDC28 protein kinase regulatory subunit 1B Source HGNC Symbol Acc HGNC 19083 |
| D12 | SBH0514674 | ENST00000314355.7 | CKS2 | ENSG00000123975 | CDC28 protein kinase regulatory subunit 2 Source HGNC Symbol Acc HGNC 2000 |
| E01 | SBH1219924 | ENST00000409469.5 | CUL1 | ENSG00000055130 | cullin 1 Source HGNC Symbol Acc HGNC 2551 |
| E02 | SBH1219925 | ENST00000374751.7 | CUL2 | ENSG00000108094 | cullin 2 Source HGNC Symbol Acc HGNC 2552 |
| E03 | SBH0471279 | ENST00000344951.8 | CUL3 | ENSG00000036257 | cullin 3 Source HGNC Symbol Acc HGNC 2553 |
| E04 | SBH1219965 | ENST00000343380.6 | E2F1 | ENSG00000101412 | E2F transcription factor 1 Source HGNC Symbol Acc HGNC 3113 |
| E05 | SBH1219966 | ENST00000379378.8 | E2F4 | ENSG00000205250 | E2F transcription factor 4 Source HGNC Symbol Acc HGNC 3118 |
| E06 | SBH1220019 | ENST00000370985.4 | GADD45A | ENSG00000116717 | growth arrest and DNA damage inducible alpha Source HGNC Symbol Acc HGNC 4095 |
| E07 | SBH1220044 | ENST00000454366.2 | GTSE1 | ENSG00000075218 | G2 and S-phase expressed 1 Source HGNC Symbol Acc HGNC 13698 |
| E08 | SBH1220075 | ENST00000432627.5 | HUS1 | ENSG00000136273 | HUS1 checkpoint clamp component Source HGNC Symbol Acc HGNC 5309 |
| E09 | SBH1220155 | ENST00000333479.12 | KNTC1 | ENSG00000184445 | kinetochore associated 1 Source HGNC Symbol Acc HGNC 17255 |
| E10 | SBH1220156 | ENST00000579754.1 | KPNA2 | ENSG00000182481 | karyopherin subunit alpha 2 Source HGNC Symbol Acc HGNC 6395 |
| E11 | SBH1220185 | ENST00000296509.11 | MAD2L1 | ENSG00000164109 | mitotic arrest deficient 2 like 1 Source HGNC Symbol Acc HGNC 6763 |
| E12 | SBH0400477 | ENST00000456915.1 | MAD2L2 | ENSG00000116670 | mitotic arrest deficient 2 like 2 Source HGNC Symbol Acc HGNC 6764 |
| F01 | SBH1220200 | ENST00000491422.1 | MCM2 | ENSG00000073111 | minichromosome maintenance complex component 2 Source HGNC Symbol Acc HGNC 6944 |
| F02 | SBH1220201 | ENST00000596288.6 | MCM3 | ENSG00000112118 | minichromosome maintenance complex component 3 Source HGNC Symbol Acc HGNC 6945 |
| F03 | SBH0233883 | ENST00000262105.6 | MCM4 | ENSG00000104738 | minichromosome maintenance complex component 4 Source HGNC Symbol Acc HGNC 6947 |
| F04 | SBH1220202 | ENST00000416905.1 | MCM5 | ENSG00000100297 | minichromosome maintenance complex component 5 Source HGNC Symbol Acc HGNC 6948 |
| F05 | SBH1220207 | ENST00000523991.5 | MDM2 | ENSG00000135679 | MDM2 proto-oncogene Source HGNC Symbol Acc HGNC 6973 |
| F06 | SBH1220213 | ENST00000368654.8 | MKI67 | ENSG00000148773 | marker of proliferation Ki-67 Source HGNC Symbol Acc HGNC 7107 |
| F07 | SBH1220226 | ENST00000557134.1 | MNAT1 | ENSG00000020426 | MNAT1, CDK activating kinase assembly factor Source HGNC Symbol Acc HGNC 7181 |
| F08 | SBH0627154 | ENST00000323977.7 | MRE11 | ENSG00000020922 | MRE11 homolog, double strand break repair nuclease Source HGNC Symbol Acc HGNC 7230 |
| F09 | SBH0220644 | ENST00000265433.7 | NBN | ENSG00000104320 | nibrin Source HGNC Symbol Acc HGNC 7652 |
| F10 | SBH0532031 | ENST00000325577.8 | RAD1 | ENSG00000113456 | RAD1 checkpoint DNA exonuclease Source HGNC Symbol Acc HGNC 9806 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|---------|-----------------|--|
| F11 | SBH0068778 | ENST00000305138.8 | RAD17 | ENSG00000152942 | RAD17 checkpoint clamp loader component Source HGNC Symbol Acc HGNC 9807 |
| F12 | SBH1220355 | ENST00000423169.6 | RAD51 | ENSG00000051180 | RAD51 recombinase Source HGNC Symbol Acc HGNC 9817 |
| G01 | SBH1220357 | ENST00000307980.7 | RAD9A | ENSG00000172613 | RAD9 checkpoint clamp component A Source HGNC Symbol Acc HGNC 9827 |
| G02 | SBH0093533 | ENST00000267163.5 | RB1 | ENSG00000139687 | RB transcriptional corepressor 1 Source HGNC Symbol Acc HGNC 9884 |
| G03 | SBH1220358 | ENST00000582354.5 | RBBP8 | ENSG00000101773 | RB binding protein 8, endonuclease Source HGNC Symbol Acc HGNC 9891 |
| G04 | SBH1220360 | ENST00000334359.7 | RBL1 | ENSG00000080839 | RB transcriptional corepressor like 1 Source HGNC Symbol Acc HGNC 9893 |
| G05 | SBH1220361 | ENST00000262133.11 | RBL2 | ENSG00000103479 | RB transcriptional corepressor like 2 Source HGNC Symbol Acc HGNC 9894 |
| G06 | SBH1220391 | ENST00000357949.5 | SERTAD1 | ENSG00000197019 | SERTA domain containing 1 Source HGNC Symbol Acc HGNC 17932 |
| G07 | SBH1220400 | ENST00000274254.9 | SKP2 | ENSG00000145604 | S-phase kinase associated protein 2 Source HGNC Symbol Acc HGNC 10901 |
| G08 | SBH1220427 | ENST00000426559.6 | STMN1 | ENSG00000117632 | stathmin 1 Source HGNC Symbol Acc HGNC 6510 |
| G09 | SBH1220440 | ENST00000375370.10 | TFDP1 | ENSG00000198176 | transcription factor Dp-1 Source HGNC Symbol Acc HGNC 11749 |
| G10 | SBH0244904 | ENST00000486111.5 | TFDP2 | ENSG00000114126 | transcription factor Dp-2 Source HGNC Symbol Acc HGNC 11751 |
| G11 | SBH1220486 | ENST00000445888.6 | TP53 | ENSG00000141510 | tumor protein p53 Source HGNC Symbol Acc HGNC 11998 |
| G12 | SBH1220523 | ENST00000450114.7 | WEE1 | ENSG00000166483 | WEE1 G2 checkpoint kinase Source HGNC Symbol Acc HGNC 12761 |
| 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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