

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

Human Epithelial to Mesenchymal Transition (EMT)

Cat. no. 249950 SBHS-090ZR

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 (Rotor-Gene): QuantiNova LNA 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 PCR System Handbook at www.qiagen.com for further details.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|--------|----------|---------|--------|--------|-------|----------|--------|--------|--------|--------|--------|
| A | AHNAK | AKT1 | BMP1 | BMP2 | BMP7 | CALD1 | CAMK2N1 | CAV2 | CDH1 | CDH2 | COL1A2 | COL3A1 |
| B | COL5A2 | CTNNB1 | DSC2 | DSP | EGFR | ERBB3 | ESR1 | F11R | FGFBP1 | FN1 | FOXC2 | FZD7 |
| C | GNG11 | GSC | GSK3B | IGFBP4 | IL1RN | ILK | ITGA5 | ITGAV | ITGB1 | JAG1 | KRT14 | KRT19 |
| D | KRT7 | MAP1B | MMP2 | MMP3 | MMP9 | MSN | MST1R | NODAL | NOTCH1 | NUDT13 | OCLN | PDGFRB |
| E | PLEK2 | DESI1 | PTK2 | PTP4A1 | RAC1 | RGS2 | SERPINE1 | GEMIN2 | SMAD2 | SNAI1 | SNAI2 | SNAI3 |
| F | SOX10 | SPARC | SPP1 | STAT3 | STEAP1 | TCF3 | TCF4 | TFPI2 | TGFB1 | TGFB2 | TGFB3 | TIMP1 |
| G | TMEFF1 | TMEM132A | TSPAN13 | TWIST1 | VCAN | VIM | VPS13A | WNT11 | WNT5A | WNT5B | ZEB1 | ZEB2 |
| 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 | SBH0115423 | ENST00000257 247.11 | AHNAK | ENSG000000 124942 | AHNAK nucleoprotein Source HGNC Symbol Acc HGNC 347 |
| A02 | SBH0095396 | ENST00000555 528.5 | AKT1 | ENSG000000 142208 | AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391 |
| A03 | SBH1219801 | ENST00000354 870.5 | BMP1 | ENSG000000 168487 | bone morphogenetic protein 1 Source HGNC Symbol Acc HGNC 1067 |
| A04 | SBH1219802 | ENST00000378 827.5 | BMP2 | ENSG000000 125845 | bone morphogenetic protein 2 Source HGNC Symbol Acc HGNC 1069 |
| A05 | SBH1219806 | ENST00000450 594.6 | BMP7 | ENSG000000 101144 | bone morphogenetic protein 7 Source HGNC Symbol Acc HGNC 1074 |
| A06 | SBH0414365 | ENST00000361 901.6 | CALD1 | ENSG000000 122786 | caldesmon 1 Source HGNC Symbol Acc HGNC 1441 |
| A07 | SBH1219821 | ENST00000375 078.4 | CAMK2N1 | ENSG000000 162545 | calcium/calmodulin dependent protein kinase II inhibitor 1 Source HGNC Symbol Acc HGNC 24190 |
| A08 | SBH0607858 | ENST00000484 871.5 | CAV2 | ENSG000000 105971 | caveolin 2 Source HGNC Symbol Acc HGNC 1528 |
| A09 | SBH1219869 | ENST00000261 769.10 | CDH1 | ENSG000000 039068 | cadherin 1 Source HGNC Symbol Acc HGNC 1748 |
| A10 | SBH1219870 | ENST00000269 141.8 | CDH2 | ENSG000000 170558 | cadherin 2 Source HGNC Symbol Acc HGNC 1759 |
| A11 | SBH0096733 | ENST00000297 268.10 | COL1A2 | ENSG000000 164692 | collagen type I alpha 2 chain Source HGNC Symbol Acc HGNC 2198 |
| A12 | SBH0521348 | ENST00000304 636.7 | COL3A1 | ENSG000000 168542 | collagen type III alpha 1 chain Source HGNC Symbol Acc HGNC 2201 |
| B01 | SBH1219899 | ENST00000649 066.1 | COL5A2 | ENSG000000 204262 | collagen type V alpha 2 chain Source HGNC Symbol Acc HGNC 2210 |
| B02 | SBH0588482 | ENST00000396 183.7 | CTNNB1 | ENSG000000 168036 | catenin beta 1 Source HGNC Symbol Acc HGNC 2514 |
| B03 | SBH1219959 | ENST00000280 904.10 | DSC2 | ENSG000000 134755 | desmocollin 2 Source HGNC Symbol Acc HGNC 3036 |
| B04 | SBH1219960 | ENST00000379 802.8 | DSP | ENSG000000 096696 | desmoplakin Source HGNC Symbol Acc HGNC 3052 |
| B05 | SBH1219970 | ENST00000454 757.6 | EGFR | ENSG000000 146648 | epidermal growth factor receptor Source HGNC Symbol Acc HGNC 3236 |
| B06 | SBH1219981 | ENST00000549 832.1 | ERBB3 | ENSG000000 065361 | erb-b2 receptor tyrosine kinase 3 Source HGNC Symbol Acc HGNC 3431 |
| B07 | SBH0125383 | ENST00000206 249.7 | ESR1 | ENSG000000 091831 | estrogen receptor 1 Source HGNC Symbol Acc HGNC 3467 |
| B08 | SBH1219988 | ENST00000368 026.11 | F11R | ENSG000000 158769 | F11 receptor Source HGNC Symbol Acc HGNC 14685 |
| B09 | SBH0619645 | ENST00000382 333.1 | FGFBP1 | ENSG000000 137440 | fibroblast growth factor binding protein 1 Source HGNC Symbol Acc HGNC 19695 |
| B10 | SBH1220003 | ENST00000354 785.9 | FN1 | ENSG000000 115414 | fibronectin 1 Source HGNC Symbol Acc HGNC 3778 |
| B11 | SBH1220006 | ENST00000320 354.6 | FOXC2 | ENSG000000 176692 | forkhead box C2 Source HGNC Symbol Acc HGNC 3801 |
| B12 | SBH0357958 | ENST00000286 201.2 | FZD7 | ENSG000000 155760 | frizzled class receptor 7 Source HGNC Symbol Acc HGNC 4045 |
| C01 | SBH0478483 | ENST00000248 564.5 | GNG11 | ENSG000000 127920 | G protein subunit gamma 11 Source HGNC Symbol Acc HGNC 4403 |
| C02 | SBH1220040 | ENST00000238 558.4 | GSC | ENSG000000 133937 | goosecoid homeobox Source HGNC Symbol Acc HGNC 4612 |
| C03 | SBH0579883 | ENST00000316 626.5 | GSK3B | ENSG000000 082701 | glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617 |
| C04 | SBH1220093 | ENST00000269 593.5 | IGFBP4 | ENSG000000 141753 | insulin like growth factor binding protein 4 Source HGNC Symbol Acc HGNC 5473 |
| C05 | SBH0473919 | ENST00000354 115.6 | IL1RN | ENSG000000 136689 | interleukin 1 receptor antagonist Source HGNC Symbol Acc HGNC 6000 |
| C06 | SBH0381135 | ENST00000299 421.8 | ILK | ENSG000000 166333 | integrin linked kinase Source HGNC Symbol Acc HGNC 6040 |
| C07 | SBH1220133 | ENST00000293 379.9 | ITGA5 | ENSG000000 161638 | integrin subunit alpha 5 Source HGNC Symbol Acc HGNC 6141 |
| C08 | SBH0064907 | ENST00000460 641.1 | ITGAV | ENSG000000 138448 | integrin subunit alpha V Source HGNC Symbol Acc HGNC 6150 |
| C09 | SBH1220136 | ENST00000302 278.8 | ITGB1 | ENSG000000 150093 | integrin subunit beta 1 Source HGNC Symbol Acc HGNC 6153 |
| C10 | SBH0407654 | ENST00000254 958.10 | JAG1 | ENSG000000 101384 | jagged 1 Source HGNC Symbol Acc HGNC 6188 |
| | | ENST00000167 | | ENSG000000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|----------|-----------------|--|
| C11 | SBH1220158 | 586.7 | KRT14 | 186847 | keratin 14 Source HGNC Symbol Acc HGNC 6416 |
| C12 | SBH1220159 | ENST00000361566.7 | KRT19 | ENSG00000171345 | keratin 19 Source HGNC Symbol Acc HGNC 6436 |
| D01 | SBH1220160 | ENST00000331817.6 | KRT7 | ENSG00000135480 | keratin 7 Source HGNC Symbol Acc HGNC 6445 |
| D02 | SBH1220187 | ENST00000296755.12 | MAP1B | ENSG00000131711 | microtubule associated protein 1B Source HGNC Symbol Acc HGNC 6836 |
| D03 | SBH1220222 | ENST00000570308.5 | MMP2 | ENSG00000087245 | matrix metalloproteinase 2 Source HGNC Symbol Acc HGNC 7166 |
| D04 | SBH1220223 | ENST00000299855.10 | MMP3 | ENSG00000149968 | matrix metalloproteinase 3 Source HGNC Symbol Acc HGNC 7173 |
| D05 | SBH0471278 | ENST00000372330.3 | MMP9 | ENSG00000100985 | matrix metalloproteinase 9 Source HGNC Symbol Acc HGNC 7176 |
| D06 | SBH1220230 | ENST00000360270.7 | MSN | ENSG00000147065 | moesin Source HGNC Symbol Acc HGNC 7373 |
| D07 | SBH0127162 | ENST00000621387.4 | MST1R | ENSG00000164078 | macrophage stimulating 1 receptor Source HGNC Symbol Acc HGNC 7381 |
| D08 | SBH0463463 | ENST00000287139.7 | NODAL | ENSG00000156574 | nodal growth differentiation factor Source HGNC Symbol Acc HGNC 7865 |
| D09 | SBH0615258 | ENST00000277541.7 | NOTCH1 | ENSG00000148400 | notch 1 Source HGNC Symbol Acc HGNC 7881 |
| D10 | SBH0402961 | ENST00000357321.9 | NUDT13 | ENSG00000166321 | nudix hydrolase 13 Source HGNC Symbol Acc HGNC 18827 |
| D11 | SBH1220284 | ENST00000355237.6 | OCLN | ENSG00000197822 | occludin Source HGNC Symbol Acc HGNC 8104 |
| D12 | SBH1220293 | ENST00000261799.9 | PDGFRB | ENSG00000113721 | platelet derived growth factor receptor beta Source HGNC Symbol Acc HGNC 8804 |
| E01 | SBH1220316 | ENST00000216446.9 | PLEK2 | ENSG00000100558 | pleckstrin 2 Source HGNC Symbol Acc HGNC 19238 |
| E02 | SBH1219945 | ENST00000263256.7 | DESI1 | ENSG00000100418 | desumoylating isopeptidase 1 Source HGNC Symbol Acc HGNC 24577 |
| E03 | SBH1220345 | ENST00000523539.5 | PTK2 | ENSG00000169398 | protein tyrosine kinase 2 Source HGNC Symbol Acc HGNC 9611 |
| E04 | SBH0121737 | ENST00000626021.2 | PTP4A1 | ENSG00000112245 | protein tyrosine phosphatase type IVA, member 1 Source HGNC Symbol Acc HGNC 9634 |
| E05 | SBH1220352 | ENST00000356142.4 | RAC1 | ENSG00000136238 | Rac family small GTPase 1 Source HGNC Symbol Acc HGNC 9801 |
| E06 | SBH1220366 | ENST00000235382.7 | RGS2 | ENSG00000116741 | regulator of G protein signaling 2 Source HGNC Symbol Acc HGNC 9998 |
| E07 | SBH1220389 | ENST00000223095.4 | SERPINE1 | ENSG00000106366 | serpin family E member 1 Source HGNC Symbol Acc HGNC 8583 |
| E08 | SBH0401216 | ENST00000308317.10 | GEMIN2 | ENSG00000092208 | gem nuclear organelle associated protein 2 Source HGNC Symbol Acc HGNC 10884 |
| E09 | SBH1220405 | ENST00000262160.11 | SMAD2 | ENSG00000175387 | SMAD family member 2 Source HGNC Symbol Acc HGNC 6768 |
| E10 | SBH1220409 | ENST00000244050.3 | SNAI1 | ENSG00000124216 | snail family transcriptional repressor 1 Source HGNC Symbol Acc HGNC 11128 |
| E11 | SBH1220410 | ENST00000642303.1 | SNAI2 | ENSG00000019549 | snail family transcriptional repressor 2 Source HGNC Symbol Acc HGNC 11094 |
| E12 | SBH1220411 | ENST00000332281.6 | SNAI3 | ENSG00000185669 | snail family transcriptional repressor 3 Source NCBI gene Acc 333929 |
| F01 | SBH1220416 | ENST00000360880.6 | SOX10 | ENSG00000100146 | SRY-box 10 Source HGNC Symbol Acc HGNC 11190 |
| F02 | SBH1220420 | ENST00000521569.1 | SPARC | ENSG00000113140 | secreted protein acidic and cysteine rich Source HGNC Symbol Acc HGNC 11219 |
| F03 | SBH0180162 | ENST00000237623.11 | SPP1 | ENSG00000118785 | secreted phosphoprotein 1 Source HGNC Symbol Acc HGNC 11255 |
| F04 | SBH0341614 | ENST00000404395.3 | STAT3 | ENSG00000168610 | signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364 |
| F05 | SBH1220425 | ENST00000297205.7 | STEAP1 | ENSG00000164647 | STEAP family member 1 Source HGNC Symbol Acc HGNC 11378 |
| F06 | SBH0362567 | ENST00000395423.7 | TCF3 | ENSG00000071564 | transcription factor 3 Source HGNC Symbol Acc HGNC 11633 |
| F07 | SBH0089633 | ENST00000356073.8 | TCF4 | ENSG00000196628 | transcription factor 4 Source HGNC Symbol Acc HGNC 11634 |
| F08 | SBH0102008 | ENST00000649730.1 | TFPI2 | ENSG00000105825 | tissue factor pathway inhibitor 2 Source HGNC Symbol Acc HGNC 11761 |
| F09 | SBH1220443 | ENST00000598758.5 | TGFB1 | ENSG00000105329 | transforming growth factor beta 1 Source NCBI gene Acc 7040 |
| F10 | SBH1220444 | ENST00000366930.9 | TGFB2 | ENSG00000092969 | transforming growth factor beta 2 Source HGNC Symbol Acc HGNC 11768 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|----------|-----------------|--|
| F11 | SBH0179529 | ENST00000238682.7 | TGFB3 | ENSG00000119699 | transforming growth factor beta 3 Source HGNC Symbol Acc HGNC 11769 |
| F12 | SBH1220454 | ENST00000218388.9 | TIMP1 | ENSG00000102265 | TIMP metalloproteinase inhibitor 1 Source HGNC Symbol Acc HGNC 11820 |
| G01 | SBH1220467 | ENST00000374879.5 | TMEFF1 | ENSG00000241697 | transmembrane protein with EGF like and two follistatin like domains 1 Source HGNC Symbol Acc HGNC 11866 |
| G02 | SBH0430856 | ENST00000453848.6 | TMEM132A | ENSG00000006118 | transmembrane protein 132A Source HGNC Symbol Acc HGNC 31092 |
| G03 | SBH0198926 | ENST00000466195.1 | TSPAN13 | ENSG00000106537 | tetraspanin 13 Source HGNC Symbol Acc HGNC 21643 |
| G04 | SBH1220496 | ENST00000242261.6 | TWIST1 | ENSG00000122691 | twist family bHLH transcription factor 1 Source HGNC Symbol Acc HGNC 12428 |
| G05 | SBH1220516 | ENST00000343200.9 | VCAN | ENSG00000038427 | versican Source HGNC Symbol Acc HGNC 2464 |
| G06 | SBH1220518 | ENST00000544301.7 | VIM | ENSG00000026025 | vimentin Source HGNC Symbol Acc HGNC 12692 |
| G07 | SBH1220520 | ENST00000643348.1 | VPS13A | ENSG00000197969 | vacuolar protein sorting 13 homolog A Source HGNC Symbol Acc HGNC 1908 |
| G08 | SBH1220528 | ENST00000322563.8 | WNT11 | ENSG00000085741 | Wnt family member 11 Source HGNC Symbol Acc HGNC 12776 |
| G09 | SBH0548767 | ENST00000264634.8 | WNT5A | ENSG00000114251 | Wnt family member 5A Source HGNC Symbol Acc HGNC 12784 |
| G10 | SBH1220534 | ENST00000397196.7 | WNT5B | ENSG00000111186 | Wnt family member 5B Source HGNC Symbol Acc HGNC 16265 |
| G11 | SBH0357652 | ENST00000320985.14 | ZEB1 | ENSG00000148516 | zinc finger E-box binding homeobox 1 Source HGNC Symbol Acc HGNC 11642 |
| G12 | SBH1220542 | ENST00000558170.6 | ZEB2 | ENSG00000169554 | zinc finger E-box binding homeobox 2 Source HGNC Symbol Acc HGNC 14881 |
| 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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