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

# Human Focal Adhesions

## Cat. no. 249950 SBHS-145ZR

## 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 | ACTN1 | ACTN2 | ACTN4 | AKT1 | AKT2 | AKT3 | ARHGAP5 | BCAR1 | CAPN2 | CAV1 | CAV2 | CAV3 |
| B | CDC42 | CRK | CRKL | CTNNB1 | DIAPH1 | DOCK1 | DST | FLNA | FLNB | FYN | GRB2 | GSK3B |
| C | HRAS | ILK | ITGA1 | ITGA11 | ITGA2 | ITGA2B | ITGA3 | ITGA4 | ITGA5 | ITGA6 | ITGA7 | ITGA8 |
| D | ITGA9 | ITGAL | ITGAM | ITGAV | ITGAX | ITGB1 | ITGB2 | ITGB3 | ITGB4 | ITGB5 | ITGB6 | PAK1 |
| E | PAK2 | PAK3 | PAK4 | PARVA | PARVB | PARVG | PDPK1 | PIP5K1C | PLEC | PRKCA | PRKCB | PRKCG |
| F | PTEN | PTK2 | PXN | RAC1 | RAC2 | RAF1 | RAP1A | RAP1B | RAPGEF1 | RASGRF1 | RHOA | ROCK1 |
| G | ROCK2 | SHC1 | SOS1 | SOS2 | SRC | TLN1 | TNS1 | VASP | VAV1 | VAV2 | VCL | ZYX |
| 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 | SBH0484630 | ENST00000556571.1 | ACTN1 | ENSG00000072110 | actinin alpha 1 Source HGNC Symbol Acc HGNC 163 |
| A02 | SBH0614210 | ENST00000492634.6 | ACTN2 | ENSG00000077522 | actinin alpha 2 Source HGNC Symbol Acc HGNC 164 |
| A03 | SBH0569283 | ENST00000495553.1 | ACTN4 | ENSG00000130402 | actinin alpha 4 Source HGNC Symbol Acc HGNC 166 |
| A04 | SBH0095396 | ENST00000555528.5 | AKT1 | ENSG00000142208 | AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391 |
| A05 | SBH0364428 | ENST00000492463.6 | AKT2 | ENSG00000105221 | AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392 |
| A06 | SBH0031667 | ENST00000463991.5 | AKT3 | ENSG00000117020 | AKT serine/threonine kinase 3 Source HGNC Symbol Acc HGNC 393 |
| A07 | SBH0298837 | ENST00000396582.6 | ARHGAP5 | ENSG00000100852 | Rho GTPase activating protein 5 Source HGNC Symbol Acc HGNC 675 |
| A08 | SBH0344204 | ENST00000162330.10 | BCAR1 | ENSG00000050820 | BCAR1, Cas family scaffold protein Source HGNC Symbol Acc HGNC 971 |
| A09 | SBH0201957 | ENST00000472601.5 | CAPN2 | ENSG00000162909 | calpain 2 Source HGNC Symbol Acc HGNC 1479 |
| A10 | SBH0105254 | ENST00000451122.5 | CAV1 | ENSG00000105974 | caveolin 1 Source HGNC Symbol Acc HGNC 1527 |
| A11 | SBH0607858 | ENST00000484871.5 | CAV2 | ENSG00000105971 | caveolin 2 Source HGNC Symbol Acc HGNC 1528 |
| A12 | SBH0244733 | ENST00000343849.2 | CAV3 | ENSG00000182533 | caveolin 3 Source HGNC Symbol Acc HGNC 1529 |
| B01 | SBH0651826 | ENST00000651171.1 | CDC42 | ENSG00000070831 | cell division cycle 42 Source HGNC Symbol Acc HGNC 1736 |
| B02 | SBH0257676 | ENST00000574295.1 | CRK | ENSG00000167193 | CRK proto-oncogene, adaptor protein Source HGNC Symbol Acc HGNC 2362 |
| B03 | SBH0632900 | ENST00000411769.1 | CRKL | ENSG00000099942 | CRK like proto-oncogene, adaptor protein Source HGNC Symbol Acc HGNC 2363 |
| B04 | SBH0588482 | ENST00000396183.7 | CTNNB1 | ENSG00000168036 | catenin beta 1 Source HGNC Symbol Acc HGNC 2514 |
| B05 | SBH0140237 | ENST00000491754.5 | DIAPH1 | ENSG00000131504 | diaphanous related formin 1 Source HGNC Symbol Acc HGNC 2876 |
| B06 | SBH0055073 | ENST00000484400.5 | DOCK1 | ENSG00000150760 | dedicator of cytokinesis 1 Source HGNC Symbol Acc HGNC 2987 |
| B07 | SBH0408488 | ENST00000370788.6 | DST | ENSG00000151914 | dystonin Source HGNC Symbol Acc HGNC 1090 |
| B08 | SBH0353138 | ENST00000360319.9 | FLNA | ENSG00000196924 | filamin A Source HGNC Symbol Acc HGNC 3754 |
| B09 | SBH0071893 | ENST00000475487.1 | FLNB | ENSG00000136068 | filamin B Source HGNC Symbol Acc HGNC 3755 |
| B10 | SBH0633994 | ENST00000518295.5 | FYN | ENSG00000010810 | FYN proto-oncogene, Src family tyrosine kinase Source HGNC Symbol Acc HGNC 4037 |
| B11 | SBH1220038 | ENST00000392563.5 | GRB2 | ENSG00000177885 | growth factor receptor bound protein 2 Source HGNC Symbol Acc HGNC 4566 |
| B12 | SBH0579883 | ENST00000316626.5 | GSK3B | ENSG00000082701 | glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617 |
| C01 | SBH0257285 | ENST00000493230.5 | HRAS | ENSG00000174775 | HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173 |
| C02 | SBH0381135 | ENST00000299421.8 | ILK | ENSG00000166333 | integrin linked kinase Source HGNC Symbol Acc HGNC 6040 |
| C03 | SBH1220129 | ENST00000282588.6 | ITGA1 | ENSG00000213949 | integrin subunit alpha 1 Source HGNC Symbol Acc HGNC 6134 |
| C04 | SBH0035047 | ENST00000562826.5 | ITGA11 | ENSG00000137809 | integrin subunit alpha 11 Source HGNC Symbol Acc HGNC 6136 |
| C05 | SBH1220130 | ENST00000296585.10 | ITGA2 | ENSG00000164171 | integrin subunit alpha 2 Source HGNC Symbol Acc HGNC 6137 |
| C06 | SBH0294910 | ENST00000648408.1 | ITGA2B | ENSG00000005961 | integrin subunit alpha 2b Source HGNC Symbol Acc HGNC 6138 |
| C07 | SBH1220131 | ENST00000007722.11 | ITGA3 | ENSG00000005884 | integrin subunit alpha 3 Source HGNC Symbol Acc HGNC 6139 |
| C08 | SBH1220132 | ENST00000397033.7 | ITGA4 | ENSG00000115232 | integrin subunit alpha 4 Source HGNC Symbol Acc HGNC 6140 |
| C09 | SBH1220133 | ENST00000293379.9 | ITGA5 | ENSG00000161638 | integrin subunit alpha 5 Source HGNC Symbol Acc HGNC 6141 |
| C10 | SBH0096168 | ENST00000264107.11 | ITGA6 | ENSG00000091409 | integrin subunit alpha 6 Source HGNC Symbol Acc HGNC 6142 |
| | | ENST00000257 | | ENSG00000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| C11 | SBH0439269 | 879.10 | ITGA7 | 135424 | integrin subunit alpha 7 Source HGNC Symbol Acc HGNC 6143 |
| C12 | SBH1220134 | ENST00000378076.4 | ITGA8 | ENSG00000077943 | integrin subunit alpha 8 Source HGNC Symbol Acc HGNC 6144 |
| D01 | SBH0123335 | ENST00000264741.10 | ITGA9 | ENSG00000144668 | integrin subunit alpha 9 Source HGNC Symbol Acc HGNC 6145 |
| D02 | SBH1220135 | ENST00000356798.10 | ITGAL | ENSG00000005844 | integrin subunit alpha L Source HGNC Symbol Acc HGNC 6148 |
| D03 | SBH0245852 | ENST00000287497.13 | ITGAM | ENSG00000169896 | integrin subunit alpha M Source HGNC Symbol Acc HGNC 6149 |
| D04 | SBH0064907 | ENST00000460641.1 | ITGAV | ENSG00000138448 | integrin subunit alpha V Source HGNC Symbol Acc HGNC 6150 |
| D05 | SBH0462220 | ENST00000268296.8 | ITGAX | ENSG00000140678 | integrin subunit alpha X Source HGNC Symbol Acc HGNC 6152 |
| D06 | SBH1220136 | ENST00000302278.8 | ITGB1 | ENSG00000150093 | integrin subunit beta 1 Source HGNC Symbol Acc HGNC 6153 |
| D07 | SBH0032107 | ENST00000397857.5 | ITGB2 | ENSG00000160255 | integrin subunit beta 2 Source HGNC Symbol Acc HGNC 6155 |
| D08 | SBH1220137 | ENST00000559488.5 | ITGB3 | ENSG00000259207 | integrin subunit beta 3 Source HGNC Symbol Acc HGNC 6156 |
| D09 | SBH1220138 | ENST00000450894.7 | ITGB4 | ENSG00000132470 | integrin subunit beta 4 Source HGNC Symbol Acc HGNC 6158 |
| D10 | SBH1220139 | ENST00000608657.5 | ITGB5 | ENSG00000082781 | integrin subunit beta 5 Source HGNC Symbol Acc HGNC 6160 |
| D11 | SBH1220140 | ENST00000409872.1 | ITGB6 | ENSG00000115221 | integrin subunit beta 6 Source HGNC Symbol Acc HGNC 6161 |
| D12 | SBH0221748 | ENST00000356341.7 | PAK1 | ENSG00000149269 | p21 (RAC1) activated kinase 1 Source HGNC Symbol Acc HGNC 8590 |
| E01 | SBH0516046 | ENST00000426668.1 | PAK2 | ENSG00000180370 | p21 (RAC1) activated kinase 2 Source HGNC Symbol Acc HGNC 8591 |
| E02 | SBH0339419 | ENST00000518291.5 | PAK3 | ENSG00000077264 | p21 (RAC1) activated kinase 3 Source HGNC Symbol Acc HGNC 8592 |
| E03 | SBH0488739 | ENST00000599386.5 | PAK4 | ENSG00000130669 | p21 (RAC1) activated kinase 4 Source HGNC Symbol Acc HGNC 16059 |
| E04 | SBH0074910 | ENST00000528916.1 | PARVA | ENSG00000197702 | parvin alpha Source HGNC Symbol Acc HGNC 14652 |
| E05 | SBH0164689 | ENST00000444029.5 | PARVB | ENSG00000188677 | parvin beta Source HGNC Symbol Acc HGNC 14653 |
| E06 | SBH0295292 | ENST00000444313.8 | PARVG | ENSG00000138964 | parvin gamma Source HGNC Symbol Acc HGNC 14654 |
| E07 | SBH0257483 | ENST00000441549.7 | PDPK1 | ENSG00000140992 | 3-phosphoinositide dependent protein kinase 1 Source HGNC Symbol Acc HGNC 8816 |
| E08 | SBH0437614 | ENST00000592530.1 | PIP5K1C | ENSG00000186111 | phosphatidylinositol-4-phosphate 5-kinase type 1 gamma Source HGNC Symbol Acc HGNC 8996 |
| E09 | SBH0316876 | ENST00000527816.5 | PLEC | ENSG00000178209 | plectin Source HGNC Symbol Acc HGNC 9069 |
| E10 | SBH0105563 | ENST00000578063.5 | PRKCA | ENSG00000154229 | protein kinase C alpha Source HGNC Symbol Acc HGNC 9393 |
| E11 | SBH0521170 | ENST00000472066.1 | PRKCB | ENSG00000166501 | protein kinase C beta Source HGNC Symbol Acc HGNC 9395 |
| E12 | SBH0670634 | ENST00000419486.1 | PRKCG | ENSG00000126583 | protein kinase C gamma Source HGNC Symbol Acc HGNC 9402 |
| F01 | SBH1225378 | ENST00000371953.8 | PTEN | ENSG00000171862 | phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588 |
| F02 | SBH1220345 | ENST00000523539.5 | PTK2 | ENSG00000169398 | protein tyrosine kinase 2 Source HGNC Symbol Acc HGNC 9611 |
| F03 | SBH0004826 | ENST00000552550.5 | PXN | ENSG00000089159 | paxillin Source HGNC Symbol Acc HGNC 9718 |
| F04 | SBH1220352 | ENST00000356142.4 | RAC1 | ENSG00000136238 | Rac family small GTPase 1 Source HGNC Symbol Acc HGNC 9801 |
| F05 | SBH0241764 | ENST00000249071.11 | RAC2 | ENSG00000128340 | Rac family small GTPase 2 Source HGNC Symbol Acc HGNC 9802 |
| F06 | SBH0573752 | ENST00000416093.1 | RAF1 | ENSG00000132155 | Raf-1 proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 9829 |
| F07 | SBH0176409 | ENST00000356415.5 | RAP1A | ENSG00000116473 | RAP1A, member of RAS oncogene family Source HGNC Symbol Acc HGNC 9855 |
| F08 | SBH0097492 | ENST00000250559.14 | RAP1B | ENSG00000127314 | RAP1B, member of RAS oncogene family Source HGNC Symbol Acc HGNC 9857 |
| F09 | SBH0395905 | ENST00000372195.5 | RAPGEF1 | ENSG00000107263 | Rap guanine nucleotide exchange factor 1 Source HGNC Symbol Acc HGNC 4568 |
| F10 | SBH0438231 | ENST00000560943.5 | RASGRF1 | ENSG00000058335 | Ras protein specific guanine nucleotide releasing factor 1 Source HGNC Symbol Acc HGNC 9875 |
| | | | | | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|---|---|---|---|---|---|
| F11 | SBH1220367 | ENST00000418115.6 | RHOA | ENSG00000067560 | ras homolog family member A Source HGNC Symbol Acc HGNC 667 |
| F12 | SBH0145863 | ENST00000635540.1 | ROCK1 | ENSG00000067900 | Rho associated coiled-coil containing protein kinase 1 Source HGNC Symbol Acc HGNC 10251 |
| G01 | SBH0416756 | ENST00000401753.5 | ROCK2 | ENSG00000134318 | Rho associated coiled-coil containing protein kinase 2 Source HGNC Symbol Acc HGNC 10252 |
| G02 | SBH0510346 | ENST00000368450.5 | SHC1 | ENSG00000160691 | SHC adaptor protein 1 Source HGNC Symbol Acc HGNC 10840 |
| G03 | SBH0363804 | ENST00000426016.5 | SOS1 | ENSG00000115904 | SOS Ras/Rac guanine nucleotide exchange factor 1 Source HGNC Symbol Acc HGNC 11187 |
| G04 | SBH0069996 | ENST00000556452.1 | SOS2 | ENSG00000100485 | SOS Ras/Rho guanine nucleotide exchange factor 2 Source HGNC Symbol Acc HGNC 11188 |
| G05 | SBH0514958 | ENST00000489153.1 | SRC | ENSG00000197122 | SRC proto-oncogene, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 11283 |
| G06 | SBH0194513 | ENST00000466916.1 | TLN1 | ENSG00000137076 | talin 1 Source HGNC Symbol Acc HGNC 11845 |
| G07 | SBH0348880 | ENST00000446903.5 | TNS1 | ENSG00000079308 | tensin 1 Source HGNC Symbol Acc HGNC 11973 |
| G08 | SBH0444189 | ENST00000586014.5 | VASP | ENSG00000125753 | vasodilator stimulated phosphoprotein Source HGNC Symbol Acc HGNC 12652 |
| G09 | SBH0216129 | ENST00000596764.5 | VAV1 | ENSG00000141968 | vav guanine nucleotide exchange factor 1 Source HGNC Symbol Acc HGNC 12657 |
| G10 | SBH0264273 | ENST00000486113.1 | VAV2 | ENSG00000160293 | vav guanine nucleotide exchange factor 2 Source HGNC Symbol Acc HGNC 12658 |
| G11 | SBH0626257 | ENST00000478896.2 | VCL | ENSG00000035403 | vinculin Source HGNC Symbol Acc HGNC 12665 |
| G12 | SBH0382988 | ENST00000436448.1 | ZYX | ENSG00000159840 | zyxin Source HGNC Symbol Acc HGNC 13200 |
| 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.