

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

Human Neurogenesis

Cat. no. 249950 SBHS-404ZA

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 | ACHE | ADORA1 | ADORA2A | ALK | APBB1 | APOE | APP | ARTN | ASCL1 | BCL2 | BDNF | BMP2 |
| B | BMP4 | BMP8B | CDK5R1 | CDK5RAP2 | CHRM2 | CREB1 | CXCL1 | DCX | DLG4 | DLL1 | DRD2 | DVL3 |
| C | EFNB1 | EGF | EP300 | ERBB2 | FGF2 | FLNA | GDNF | GPI | GRIN1 | HDAC4 | HES1 | HEY1 |
| D | HEY2 | HEYL | IL3 | MAP2 | MDK | MEF2C | KMT2A | NDN | NDP | NEUROD1 | NEUROG1 | NEUROG2 |
| E | NF1 | NOG | NOTCH1 | NOTCH2 | NR2E3 | NRCAM | NRG1 | NRP1 | NRP2 | NTF3 | NTN1 | TENM1 |
| F | OLIG2 | PAFAH1B1 | PARD3 | PAX3 | PAX5 | PAX6 | POU3F3 | POU4F1 | PTN | RAC1 | ROBO1 | RTN4 |
| G | S100A6 | S100B | SHH | SLIT2 | SOD1 | SOX2 | SOX8 | STAT3 | TGFB1 | TH | TNR | VEGFA |
| 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 | SBH0162921 | ENST00000440755.5 | ACHE | ENSG00000087085 | acetylcholinesterase (Cartwright blood group) Source HGNC Symbol Acc HGNC 108 |
| A02 | SBH0029645 | ENST00000337894.9 | ADORA1 | ENSG00000163485 | adenosine A1 receptor Source HGNC Symbol Acc HGNC 262 |
| A03 | SBH0613178 | ENST00000467385.5 | ADORA2A | ENSG00000128271 | adenosine A2a receptor Source HGNC Symbol Acc HGNC 263 |
| A04 | SBH0300392 | ENST00000642122.1 | ALK | ENSG00000171094 | ALK receptor tyrosine kinase Source HGNC Symbol Acc HGNC 427 |
| A05 | SBH0163775 | ENST00000618005.4 | APBB1 | ENSG00000166313 | amyloid beta precursor protein binding family B member 1 Source HGNC Symbol Acc HGNC 581 |
| A06 | SBH0562930 | ENST00000434152.5 | APOE | ENSG00000130203 | apolipoprotein E Source HGNC Symbol Acc HGNC 613 |
| A07 | SBH1219749 | ENST00000348990.9 | APP | ENSG00000142192 | amyloid beta precursor protein Source HGNC Symbol Acc HGNC 620 |
| A08 | SBH0038959 | ENST00000414809.7 | ARTN | ENSG00000117407 | artemin Source HGNC Symbol Acc HGNC 727 |
| A09 | SBH0664239 | ENST00000266744.4 | ASCL1 | ENSG00000139352 | achaete-scute family bHLH transcription factor 1 Source HGNC Symbol Acc HGNC 738 |
| A10 | SBH1219786 | ENST00000398117.1 | BCL2 | ENSG00000171791 | BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990 |
| A11 | SBH0006040 | ENST00000525528.1 | BDNF | ENSG00000176697 | brain derived neurotrophic factor Source HGNC Symbol Acc HGNC 1033 |
| A12 | SBH1219802 | ENST00000378827.5 | BMP2 | ENSG00000125845 | bone morphogenetic protein 2 Source HGNC Symbol Acc HGNC 1069 |
| B01 | SBH0613995 | ENST00000417573.5 | BMP4 | ENSG00000125378 | bone morphogenetic protein 4 Source HGNC Symbol Acc HGNC 1071 |
| B02 | SBH0222101 | ENST00000372827.8 | BMP8B | ENSG00000116985 | bone morphogenetic protein 8b Source HGNC Symbol Acc HGNC 1075 |
| B03 | SBH1219874 | ENST00000313401.4 | CDK5R1 | ENSG00000176749 | cyclin dependent kinase 5 regulatory subunit 1 Source HGNC Symbol Acc HGNC 1775 |
| B04 | SBH0586517 | ENST00000360822.7 | CDK5RAP2 | ENSG00000136861 | CDK5 regulatory subunit associated protein 2 Source HGNC Symbol Acc HGNC 18672 |
| B05 | SBH0006808 | ENST00000401861.1 | CHRM2 | ENSG00000181072 | cholinergic receptor muscarinic 2 Source HGNC Symbol Acc HGNC 1951 |
| B06 | SBH0077258 | ENST00000353267.8 | CREB1 | ENSG00000118260 | cAMP responsive element binding protein 1 Source HGNC Symbol Acc HGNC 2345 |
| B07 | SBH0404660 | ENST00000395761.3 | CXCL1 | ENSG00000163739 | C-X-C motif chemokine ligand 1 Source HGNC Symbol Acc HGNC 4602 |
| B08 | SBH0382691 | ENST00000488120.2 | DCX | ENSG00000077279 | doublecortin Source HGNC Symbol Acc HGNC 2714 |
| B09 | SBH0179092 | ENST00000491753.2 | DLG4 | ENSG00000132535 | discs large MAGUK scaffold protein 4 Source HGNC Symbol Acc HGNC 2903 |
| B10 | SBH0070314 | ENST00000630500.1 | DLL1 | ENSG00000198719 | delta like canonical Notch ligand 1 Source HGNC Symbol Acc HGNC 2908 |
| B11 | SBH0344008 | ENST00000535984.1 | DRD2 | ENSG00000149295 | dopamine receptor D2 Source HGNC Symbol Acc HGNC 3023 |
| B12 | SBH0071963 | ENST00000313143.9 | DVL3 | ENSG00000161202 | dishevelled segment polarity protein 3 Source HGNC Symbol Acc HGNC 3087 |
| C01 | SBH0537762 | ENST00000204961.5 | EFNB1 | ENSG00000090776 | ephrin B1 Source HGNC Symbol Acc HGNC 3226 |
| C02 | SBH0321686 | ENST00000265171.9 | EGF | ENSG00000138798 | epidermal growth factor Source HGNC Symbol Acc HGNC 3229 |
| C03 | SBH1219977 | ENST00000263253.9 | EP300 | ENSG00000100393 | E1A binding protein p300 Source HGNC Symbol Acc HGNC 3373 |
| C04 | SBH0056013 | ENST00000269571.9 | ERBB2 | ENSG00000141736 | erb-b2 receptor tyrosine kinase 2 Source HGNC Symbol Acc HGNC 3430 |
| C05 | SBH1220000 | ENST00000264498.7 | FGF2 | ENSG00000138685 | fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676 |
| C06 | SBH0353138 | ENST00000360319.9 | FLNA | ENSG00000196924 | filamin A Source HGNC Symbol Acc HGNC 3754 |
| C07 | SBH0310916 | ENST00000502572.1 | GDNF | ENSG00000168621 | glial cell derived neurotrophic factor Source HGNC Symbol Acc HGNC 4232 |
| C08 | SBH1220031 | ENST00000644934.1 | GPI | ENSG00000105220 | glucose-6-phosphate isomerase Source HGNC Symbol Acc HGNC 4458 |
| C09 | SBH0229177 | ENST00000371559.8 | GRIN1 | ENSG00000176884 | glutamate ionotropic receptor NMDA type subunit 1 Source HGNC Symbol Acc HGNC 4584 |
| C10 | SBH0538846 | ENST00000345617.7 | HDAC4 | ENSG00000068024 | histone deacetylase 4 Source HGNC Symbol Acc HGNC 14063 |
| | | ENST00000232 | | ENSG000000 | |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|----------|-----------------|---|
| C11 | SBH1220054 | 424.4 | HES1 | 114315 | hes family bHLH transcription factor 1 Source HGNC Symbol Acc HGNC 5192 |
| C12 | SBH1220056 | ENST00000518733.1 | HEY1 | ENSG00000164683 | hes related family bHLH transcription factor with YRPW motif 1 Source HGNC Symbol Acc HGNC 4880 |
| D01 | SBH0153374 | ENST000003368365.5 | HEY2 | ENSG00000135547 | hes related family bHLH transcription factor with YRPW motif 2 Source HGNC Symbol Acc HGNC 4881 |
| D02 | SBH1220057 | ENST00000372852.4 | HEYL | ENSG00000163909 | hes related family bHLH transcription factor with YRPW motif-like Source HGNC Symbol Acc HGNC 4882 |
| D03 | SBH0584080 | ENST00000296870.2 | IL3 | ENSG00000164399 | interleukin 3 Source HGNC Symbol Acc HGNC 6011 |
| D04 | SBH0000648 | ENST00000361559.8 | MAP2 | ENSG00000078018 | microtubule associated protein 2 Source HGNC Symbol Acc HGNC 6839 |
| D05 | SBH0046663 | ENST00000395566.8 | MDK | ENSG00000110492 | midkine Source HGNC Symbol Acc HGNC 6972 |
| D06 | SBH0475014 | ENST00000625585.2 | MEF2C | ENSG00000081189 | myocyte enhancer factor 2C Source HGNC Symbol Acc HGNC 6996 |
| D07 | SBH1220153 | ENST00000389506.10 | KMT2A | ENSG00000118058 | lysine methyltransferase 2A Source HGNC Symbol Acc HGNC 7132 |
| D08 | SBH0400822 | ENST00000649030.1 | NDN | ENSG00000182636 | necdin, MAGE family member Source HGNC Symbol Acc HGNC 7675 |
| D09 | SBH0209223 | ENST00000470584.1 | NDP | ENSG00000124479 | NDP, norrin cystine knot growth factor Source HGNC Symbol Acc HGNC 7678 |
| D10 | SBH0212925 | ENST00000295108.3 | NEUROD1 | ENSG00000162992 | neuronal differentiation 1 Source HGNC Symbol Acc HGNC 7762 |
| D11 | SBH0042183 | ENST00000314744.6 | NEUROG1 | ENSG00000181965 | neurogenin 1 Source HGNC Symbol Acc HGNC 7764 |
| D12 | SBH0511587 | ENST00000313341.4 | NEUROG2 | ENSG00000178403 | neurogenin 2 Source HGNC Symbol Acc HGNC 13805 |
| E01 | SBH0472829 | ENST00000358273.8 | NF1 | ENSG00000196712 | neurofibromin 1 Source HGNC Symbol Acc HGNC 7765 |
| E02 | SBH0651509 | ENST00000332822.4 | NOG | ENSG00000183691 | noggin Source HGNC Symbol Acc HGNC 7866 |
| E03 | SBH0615258 | ENST00000277541.7 | NOTCH1 | ENSG00000148400 | notch 1 Source HGNC Symbol Acc HGNC 7881 |
| E04 | SBH0378554 | ENST00000256646.7 | NOTCH2 | ENSG00000134250 | notch 2 Source HGNC Symbol Acc HGNC 7882 |
| E05 | SBH0636774 | ENST00000621098.1 | NR2E3 | ENSG00000278570 | nuclear receptor subfamily 2 group E member 3 Source HGNC Symbol Acc HGNC 7974 |
| E06 | SBH0603284 | ENST00000413765.6 | NRCAM | ENSG00000091129 | neuronal cell adhesion molecule Source HGNC Symbol Acc HGNC 7994 |
| E07 | SBH0274670 | ENST00000652592.1 | NRG1 | ENSG00000157168 | neuregulin 1 Source HGNC Symbol Acc HGNC 7997 |
| E08 | SBH1220281 | ENST00000374823.9 | NRP1 | ENSG00000099250 | neuropilin 1 Source HGNC Symbol Acc HGNC 8004 |
| E09 | SBH0541562 | ENST00000357785.9 | NRP2 | ENSG00000118257 | neuropilin 2 Source HGNC Symbol Acc HGNC 8005 |
| E10 | SBH0012802 | ENST00000543548.1 | NTF3 | ENSG00000185652 | neurotrophin 3 Source HGNC Symbol Acc HGNC 8023 |
| E11 | SBH0272505 | ENST00000173229.7 | NTN1 | ENSG00000065320 | netrin 1 Source HGNC Symbol Acc HGNC 8029 |
| E12 | SBH0431187 | ENST00000461429.1 | TENM1 | ENSG00000009694 | teneurin transmembrane protein 1 Source HGNC Symbol Acc HGNC 8117 |
| F01 | SBH0642856 | ENST00000333337.3 | OLIG2 | ENSG00000205927 | oligodendrocyte transcription factor 2 Source HGNC Symbol Acc HGNC 9398 |
| F02 | SBH0153141 | ENST00000571495.1 | PAFAH1B1 | ENSG00000007168 | platelet activating factor acetylhydrolase 1b regulatory subunit 1 Source HGNC Symbol Acc HGNC 8574 |
| F03 | SBH0638795 | ENST00000374789.8 | PARD3 | ENSG00000148498 | par-3 family cell polarity regulator Source HGNC Symbol Acc HGNC 16051 |
| F04 | SBH0015205 | ENST00000392070.6 | PAX3 | ENSG00000135903 | paired box 3 Source HGNC Symbol Acc HGNC 8617 |
| F05 | SBH0623717 | ENST00000520281.5 | PAX5 | ENSG00000196092 | paired box 5 Source HGNC Symbol Acc HGNC 8619 |
| F06 | SBH0042496 | ENST00000533333.5 | PAX6 | ENSG00000007372 | paired box 6 Source HGNC Symbol Acc HGNC 8620 |
| F07 | SBH0177395 | ENST00000361360.3 | POU3F3 | ENSG00000198914 | POU class 3 homeobox 3 Source HGNC Symbol Acc HGNC 9216 |
| F08 | SBH0664038 | ENST00000377208.7 | POU4F1 | ENSG00000152192 | POU class 4 homeobox 1 Source HGNC Symbol Acc HGNC 9218 |
| F09 | SBH0080420 | ENST00000348225.6 | PTN | ENSG00000105894 | pleiotrophin Source HGNC Symbol Acc HGNC 9630 |
| F10 | SBH1220352 | ENST00000356142.4 | RAC1 | ENSG00000136238 | Rac family small GTPase 1 Source HGNC Symbol Acc HGNC 9801 |

| Position | Assay | Name | Symbol | Ensembl ID | Description |
|----------|------------|--------------------|--------|------------------|--|
| F11 | SBH0581189 | ENST00000484514.1 | ROBO1 | ENSG00000169855 | roundabout guidance receptor 1 Source HGNC Symbol Acc HGNC 10249 |
| F12 | SBH0428400 | ENST00000486085.5 | RTN4 | ENSG00000115310 | reticulon 4 Source HGNC Symbol Acc HGNC 14085 |
| G01 | SBH0242143 | ENST00000496817.5 | S100A6 | ENSG00000197956 | S100 calcium binding protein A6 Source HGNC Symbol Acc HGNC 10496 |
| G02 | SBH0183139 | ENST00000291700.9 | S100B | ENSG00000160307 | S100 calcium binding protein B Source HGNC Symbol Acc HGNC 10500 |
| G03 | SBH0041689 | ENST00000430104.5 | SHH | ENSG00000164690 | sonic hedgehog signaling molecule Source HGNC Symbol Acc HGNC 10848 |
| G04 | SBH0363286 | ENST00000504154.6 | SLIT2 | ENSG00000145147 | slit guidance ligand 2 Source HGNC Symbol Acc HGNC 11086 |
| G05 | SBH0278498 | ENST00000270142.10 | SOD1 | ENSG00000142168 | superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179 |
| G06 | SBH0499815 | ENST00000325404.3 | SOX2 | ENSG00000181449 | SRY-box 2 Source HGNC Symbol Acc HGNC 11195 |
| G07 | SBH0096379 | ENST00000566034.1 | SOX8 | ENSG00000005513 | SRY-box 8 Source HGNC Symbol Acc HGNC 11203 |
| G08 | SBH0341614 | ENST00000404395.3 | STAT3 | ENSG00000168610 | signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364 |
| G09 | SBH1220443 | ENST00000598758.5 | TGFB1 | ENSG00000105329 | transforming growth factor beta 1 Source NCBI gene Acc 7040 |
| G10 | SBH0245945 | ENST00000412076.1 | TH | ENSG00000180176 | tyrosine hydroxylase Source HGNC Symbol Acc HGNC 11782 |
| G11 | SBH0411127 | ENST00000422274.2 | TNR | ENSG00000116147 | tenascin R Source HGNC Symbol Acc HGNC 11953 |
| G12 | SBH0420322 | ENST00000425836.6 | VEGFA | ENSG00000112715 | vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680 |
| 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 | ENSG000000089157 | 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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