

# RT<sup>2</sup> Profiler PCR Array (Rotor-Gene® Format)

## Mouse Neurogenesis

Cat. no. 330231 PAMM-404ZR

For pathway expression analysis

| Format                                       | For use with the following real-time cyclers |
|----------------------------------------------|----------------------------------------------|
| RT <sup>2</sup> Profiler PCR Array, Format R | Rotor-Gene Q, other Rotor-Gene cyclers       |

### Description

The Mouse Neurogenesis RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes related to the processes of neurogenesis and neural stem cell differentiation. Genes related to the regulation of key neurogenesis processes such as the cell cycle and cell proliferation, differentiation, motility, and migration are included. This array contains the growth factors and cytokines related to neural stem cells as well as genes involved in synaptic functions, apoptosis, and cell adhesion. Cell signaling genes involved in neurogenesis are represented as well as genes involved in the regulation of transcription. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to neurogenesis and neural stem cells with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

### Shipping and storage

RT<sup>2</sup> Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

For long term storage, keep plates at –20°C.

**Note:** Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

**Note:** Open the package and store the products appropriately immediately on receipt.



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Sample & Assay Technologies

## Array layout

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.

## Gene table: RT<sup>2</sup> Profiler PCR Array

| Position | UniGene   | GenBank      | Symbol   | Description                                                                                                    |
|----------|-----------|--------------|----------|----------------------------------------------------------------------------------------------------------------|
| A01      | Mm.255464 | NM_009599    | Ache     | Acetylcholinesterase                                                                                           |
| A02      | Mm.298908 | NM_001008533 | Adora1   | Adenosine A1 receptor                                                                                          |
| A03      | Mm.333734 | NM_009630    | Adora2a  | Adenosine A2a receptor                                                                                         |
| A04      | Mm.311854 | NM_007439    | Alk      | Anaplastic lymphoma kinase                                                                                     |
| A05      | Mm.38469  | NM_009685    | Apbb1    | Amyloid beta (A4) precursor protein-binding, family B, member 1                                                |
| A06      | Mm.305152 | NM_009696    | Apoe     | Apolipoprotein E                                                                                               |
| A07      | Mm.277585 | NM_007471    | App      | Amyloid beta (A4) precursor protein                                                                            |
| A08      | Mm.56897  | NM_009711    | Artn     | Artemin                                                                                                        |
| A09      | Mm.136217 | NM_008553    | Ascl1    | Achaete-scute complex homolog 1 (Drosophila)                                                                   |
| A10      | Mm.257460 | NM_009741    | Bcl2     | B-cell leukemia/lymphoma 2                                                                                     |
| A11      | Mm.1442   | NM_007540    | Bdnf     | Brain derived neurotrophic factor                                                                              |
| A12      | Mm.103205 | NM_007553    | Bmp2     | Bone morphogenetic protein 2                                                                                   |
| B01      | Mm.6813   | NM_007554    | Bmp4     | Bone morphogenetic protein 4                                                                                   |
| B02      | Mm.439764 | NM_007559    | Bmp8b    | Bone morphogenetic protein 8b                                                                                  |
| B03      | Mm.142275 | NM_009871    | Cdk5r1   | Cyclin-dependent kinase 5, regulatory subunit 1 (p35)                                                          |
| B04      | Mm.379344 | NM_145990    | Cdk5rap2 | CDK5 regulatory subunit associated protein 2                                                                   |
| B05      | Mm.448632 | NM_203491    | Chrm2    | Cholinergic receptor, muscarinic 2, cardiac                                                                    |
| B06      | Mm.453295 | NM_133828    | Creb1    | CAMP responsive element binding protein 1                                                                      |
| B07      | Mm.21013  | NM_008176    | Cxcl1    | Chemokine (C-X-C motif) ligand 1                                                                               |
| B08      | Mm.12871  | NM_010025    | Dcx      | Doublecortin                                                                                                   |
| B09      | Mm.27256  | NM_007864    | Dlg4     | Discs, large homolog 4 (Drosophila)                                                                            |
| B10      | Mm.4875   | NM_007865    | Dll1     | Delta-like 1 (Drosophila)                                                                                      |
| B11      | Mm.41970  | NM_010077    | Drd2     | Dopamine receptor D2                                                                                           |
| B12      | Mm.247259 | NM_007889    | Dvl3     | Dishevelled 3, dsh homolog (Drosophila)                                                                        |
| C01      | Mm.3374   | NM_010110    | Efnb1    | Ephrin B1                                                                                                      |
| C02      | Mm.252481 | NM_010113    | Egf      | Epidermal growth factor                                                                                        |
| C03      | Mm.258397 | NM_177821    | Ep300    | E1A binding protein p300                                                                                       |
| C04      | Mm.290822 | NM_001003817 | ErbB2    | V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian) |
| C05      | Mm.473689 | NM_008006    | Fgf2     | Fibroblast growth factor 2                                                                                     |
| C06      | Mm.295533 | NM_010227    | Flna     | Filamin, alpha                                                                                                 |
| C07      | Mm.4679   | NM_010275    | Gdnf     | Glial cell line derived neurotrophic factor                                                                    |
| C08      | Mm.589    | NM_008155    | Gpi1     | Glucose phosphate isomerase 1                                                                                  |
| C09      | Mm.278672 | NM_008169    | Grin1    | Glutamate receptor, ionotropic, NMDA1 (zeta 1)                                                                 |
| C10      | Mm.318567 | NM_207225    | Hdac4    | Histone deacetylase 4                                                                                          |
| C11      | Mm.390859 | NM_008235    | Hes1     | Hairy and enhancer of split 1 (Drosophila)                                                                     |
| C12      | Mm.29581  | NM_010423    | Hey1     | Hairy/enhancer-of-split related with YRPW motif 1                                                              |
| D01      | Mm.103573 | NM_013904    | Hey2     | Hairy/enhancer-of-split related with YRPW motif 2                                                              |
| D02      | Mm.103615 | NM_013905    | Heyl     | Hairy/enhancer-of-split related with YRPW motif-like                                                           |
| D03      | Mm.983    | NM_010556    | Il3      | Interleukin 3                                                                                                  |
| D04      | Mm.906    | NM_010784    | Mdk      | Midkine                                                                                                        |
| D05      | Mm.24001  | NM_025282    | Mef2c    | Myocyte enhancer factor 2C                                                                                     |
| D06      | Mm.2389   | NM_001081049 | Mll1     | Myeloid/lymphoid or mixed-lineage leukemia 1                                                                   |
| D07      | Mm.256966 | NM_001039934 | Mtap2    | Microtubule-associated protein 2                                                                               |
| D08      | Mm.400253 | NM_010882    | Ndn      | Necdin                                                                                                         |
| D09      | Mm.5014   | NM_010883    | Ndp      | Norrie disease (pseudoglioma) (human)                                                                          |
| D10      | Mm.4636   | NM_010894    | Neurod1  | Neurogenic differentiation 1                                                                                   |
| D11      | Mm.266665 | NM_010896    | Neurog1  | Neurogenin 1                                                                                                   |
| D12      | Mm.42017  | NM_009718    | Neurog2  | Neurogenin 2                                                                                                   |
| E01      | Mm.255596 | NM_010897    | Nf1      | Neurofibromatosis 1                                                                                            |
| E02      | Mm.135266 | NM_008711    | Nog      | Noggin                                                                                                         |
| E03      | Mm.290610 | NM_008714    | Notch1   | Notch gene homolog 1 (Drosophila)                                                                              |
| E04      | Mm.254017 | NM_010928    | Notch2   | Notch gene homolog 2 (Drosophila)                                                                              |
| E05      | Mm.103641 | NM_013708    | Nr2e3    | Nuclear receptor subfamily 2, group E, member 3                                                                |
| E06      | Mm.208439 | NM_176930    | Nrcam    | Neuron-glia-CAM-related cell adhesion molecule                                                                 |
| E07      | Mm.153432 | NM_178591    | Nrg1     | Neuregulin 1                                                                                                   |
| E08      | Mm.271745 | NM_008737    | Nrp1     | Neuropilin 1                                                                                                   |

| Position | UniGene   | GenBank   | Symbol   | Description                                                       |
|----------|-----------|-----------|----------|-------------------------------------------------------------------|
| E09      | Mm.266341 | NM_010939 | Nrp2     | Neuropilin 2                                                      |
| E10      | Mm.267570 | NM_008742 | Ntr3     | Neurotrophin 3                                                    |
| E11      | Mm.39095  | NM_008744 | Ntn1     | Netrin 1                                                          |
| E12      | Mm.327698 | NM_011855 | Odz1     | Odd Oz/ten-m homolog 1 (Drosophila)                               |
| F01      | Mm.37289  | NM_016967 | Olig2    | Oligodendrocyte transcription factor 2                            |
| F02      | Mm.397111 | NM_013625 | Pafah1b1 | Platelet-activating factor acetylhydrolase, isoform 1b, subunit 1 |
| F03      | Mm.299254 | NM_033620 | Pard3    | Par-3 (partitioning defective 3) homolog (C. elegans)             |
| F04      | Mm.1371   | NM_008781 | Pax3     | Paired box gene 3                                                 |
| F05      | Mm.439659 | NM_008782 | Pax5     | Paired box gene 5                                                 |
| F06      | Mm.3608   | NM_013627 | Pax6     | Paired box gene 6                                                 |
| F07      | Mm.477577 | NM_008900 | Pou3f3   | POU domain, class 3, transcription factor 3                       |
| F08      | Mm.246550 | NM_011143 | Pou4f1   | POU domain, class 4, transcription factor 1                       |
| F09      | Mm.279690 | NM_008973 | Ptn      | Pleiotrophin                                                      |
| F10      | Mm.292510 | NM_009007 | Rac1     | RAS-related C3 botulinum substrate 1                              |
| F11      | Mm.310772 | NM_019413 | Robo1    | Roundabout homolog 1 (Drosophila)                                 |
| F12      | Mm.192580 | NM_194053 | Rtn4     | Reticulon 4                                                       |
| G01      | Mm.100144 | NM_011313 | S100a6   | S100 calcium binding protein A6 (calcyclin)                       |
| G02      | Mm.235998 | NM_009115 | S100b    | S100 protein, beta polypeptide, neural                            |
| G03      | Mm.57202  | NM_009170 | Shh      | Sonic hedgehog                                                    |
| G04      | Mm.289739 | NM_178804 | Slit2    | Slit homolog 2 (Drosophila)                                       |
| G05      | Mm.276325 | NM_011434 | Sod1     | Superoxide dismutase 1, soluble                                   |
| G06      | Mm.65396  | NM_011443 | Sox2     | SRY-box containing gene 2                                         |
| G07      | Mm.35784  | NM_009237 | Sox3     | SRY-box containing gene 3                                         |
| G08      | Mm.249934 | NM_011486 | Stat3    | Signal transducer and activator of transcription 3                |
| G09      | Mm.248380 | NM_011577 | Tgfb1    | Transforming growth factor, beta 1                                |
| G10      | Mm.1292   | NM_009377 | Th       | Tyrosine hydroxylase                                              |
| G11      | Mm.44701  | NM_022312 | Tnr      | Tenascin R                                                        |
| G12      | Mm.282184 | NM_009505 | Vegfa    | Vascular endothelial growth factor A                              |
| H01      | Mm.328431 | NM_007393 | Actb     | Actin, beta                                                       |
| H02      | Mm.163    | NM_009735 | B2m      | Beta-2 microglobulin                                              |
| H03      | Mm.343110 | NM_008084 | Gapdh    | Glyceraldehyde-3-phosphate dehydrogenase                          |
| H04      | Mm.3317   | NM_010368 | Gusb     | Glucuronidase, beta                                               |
| H05      | Mm.2180   | NM_008302 | Hsp90ab1 | Heat shock protein 90 alpha (cytosolic), class B member 1         |
| H06      | N/A       | SA_00106  | MGDC     | Mouse Genomic DNA Contamination                                   |
| H07      | N/A       | SA_00104  | RTC      | Reverse Transcription Control                                     |
| H08      | N/A       | SA_00104  | RTC      | Reverse Transcription Control                                     |
| H09      | N/A       | SA_00104  | RTC      | Reverse Transcription Control                                     |
| H10      | N/A       | SA_00103  | PPC      | Positive PCR Control                                              |
| H11      | N/A       | SA_00103  | PPC      | Positive PCR Control                                              |
| H12      | N/A       | SA_00103  | PPC      | Positive PCR Control                                              |

## Related products

For optimal performance, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

| Product                                                         | Contents                                                                                                 | Cat. no. |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------|
| RT <sup>2</sup> First Strand Kit (12)                           | Enzymes and reagents for cDNA synthesis                                                                  | 330401   |
| RT <sup>2</sup> SYBR Green ROX <sup>™</sup> FAST Mastermix (2)* | For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers | 330620   |

\* Larger kit sizes available; please inquire.

RT<sup>2</sup> Profiler PCR Array products 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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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