

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

## Rat let-7a Targets PCR Array

Cat. no. 330231 PARN-6008YR

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 Rat let-7a Targets RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 hsa-let-7a-5p target genes. This panel of 84 genes includes currently known experimentally verified plus bioinformatically predicted target genes regulated by hsa-let-7a-5p. This array also includes target genes regulated by other miRNAs that have the same seed sequence as hsa-let-7a-5p, including hsa-let-7b-5p, hsa-let-7c, hsa-let-7d-5p, hsa-let-7e-5p, hsa-let-7f-5p, hsa-let-7g-5p, hsa-let-7i-5p, hsa-miR-98-5p, hsa-miR-4458, and hsa-miR-4500. miRNA target gene expression analysis provides further insight into the function of these specific miRNAs. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes likely to be regulated by let-7a 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      | N/A       | NM_001106811 | Adams8  | ADAM metallopeptidase with thrombospondin type 1 motif, 8                                        |
| A02      | Rn.2305   | NM_001110139 | Atp2a2  | ATPase, Ca++ transporting, cardiac muscle, slow twitch 2                                         |
| A03      | Rn.10323  | NM_031535    | Bcl2l1  | Bcl2-like 1                                                                                      |
| A04      | Rn.2269   | NM_012783    | Bsg     | Basigin                                                                                          |
| A05      | Rn.234367 | NM_198789    | Bzw1    | Basic leucine zipper and W2 domains 1                                                            |
| A06      | Rn.10562  | NM_012922    | Casp3   | Caspase 3                                                                                        |
| A07      | Rn.13094  | NM_053702    | Ccna2   | Cyclin A2                                                                                        |
| A08      | Rn.22279  | NM_171992    | Ccnd1   | Cyclin D1                                                                                        |
| A09      | Rn.96083  | NM_022267    | Ccnd2   | Cyclin D2                                                                                        |
| A10      | Rn.11390  | NM_133571    | Cdc25a  | Cell division cycle 25 homolog A (S. pombe)                                                      |
| A11      | Rn.2427   | NM_001013103 | Cdc34   | Cell division cycle 34 homolog (S. cerevisiae)                                                   |
| A12      | Rn.162731 | NM_001191861 | Cdk6    | Cyclin-dependent kinase 6                                                                        |
| B01      | N/A       | NM_001107836 | Cntrl   | Centrosomal protein 110                                                                          |
| B02      | N/A       | XM_223341    | Cep135  | Centrosomal protein 135                                                                          |
| B03      | Rn.63247  | XM_232354    | Chd4    | Chromodomain helicase DNA binding protein 4                                                      |
| B04      | Rn.205839 | NM_021856    | Clock   | Clock homolog (mouse)                                                                            |
| B05      | Rn.107239 | NM_053356    | Col1a2  | Collagen, type I, alpha 2                                                                        |
| B06      | Rn.3247   | NM_032085    | Col3a1  | Collagen, type III, alpha 1                                                                      |
| B07      | Rn.228949 | NM_001005895 | Ddx19b  | DEAD (Asp-Glu-Ala-As) box polypeptide 19B                                                        |
| B08      | Rn.205881 | XM_006225866 | Dicer1  | Dicer 1, ribonuclease type III                                                                   |
| B09      | Rn.98260  | NM_053769    | Dusp1   | Dual specificity phosphatase 1                                                                   |
| B10      | Rn.72471  | NM_001100778 | E2f1    | E2F transcription factor 1                                                                       |
| B11      | Rn.134659 | NM_001106686 | Ago4    | Eukaryotic translation initiation factor 2C, 4                                                   |
| B12      | Rn.162933 | NM_001137645 | Fgd6    | FYVE, RhoGEF and PH domain containing 6                                                          |
| C01      | Rn.223271 | XM_232212    | Frm4b   | FERM domain containing 4B                                                                        |
| C02      | Rn.17661  | NM_031031    | Gatm    | Glycine amidinotransferase (L-arginine:glycine amidinotransferase)                               |
| C03      | Rn.49815  | NM_001013038 | Gdf6    | Growth differentiation factor 6                                                                  |
| C04      | N/A       | XM_343194    | Gnptab  | N-acetylglucosamine-1-phosphate transferase, alpha and beta subunits                             |
| C05      | Rn.83240  | NM_001113749 | Hif1an  | Hypoxia-inducible factor 1, alpha subunit inhibitor                                              |
| C06      | Rn.836    | NM_001100475 | Hip1    | Huntingtin interacting protein 1                                                                 |
| C07      | Rn.203714 | NM_001109233 | Hoxa9   | Homeobox A9                                                                                      |
| C08      | Rn.138105 | NM_019127    | Ifnb1   | Interferon beta 1, fibroblast                                                                    |
| C09      | Rn.77572  | NM_175594    | Igf2bp1 | Insulin-like growth factor 2 mRNA binding protein 1                                              |
| C10      | Rn.100446 | NM_001047888 | Igf2bp3 | Insulin-like growth factor 2 mRNA binding protein 3                                              |
| C11      | Rn.162816 | NM_080899    | Ikbkap  | Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase complex-associated protein |
| C12      | Rn.9921   | NM_053828    | Il13    | Interleukin 13                                                                                   |
| D01      | Rn.9873   | NM_012589    | Il6     | Interleukin 6                                                                                    |
| D02      | Rn.107714 | NM_001107092 | Iqcb1   | IQ motif containing B1                                                                           |
| D03      | Rn.229225 | NM_153720    | Itgb3   | Integrin, beta 3                                                                                 |
| D04      | Rn.230292 | NM_001004100 | Klk10   | Kallikrein related-peptidase 10                                                                  |
| D05      | Rn.10732  | NM_019175    | Klk6    | Kallikrein related-peptidase 6                                                                   |
| D06      | Rn.24554  | NM_031515    | Kras    | V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog                                             |
| D07      | Rn.147538 | NM_001109269 | Lin28a  | Lin-28 homolog (C. elegans)                                                                      |
| D08      | Rn.162624 | NM_001107710 | Lrig2   | Leucine-rich repeats and immunoglobulin-like domains 2                                           |
| D09      | Rn.234016 | XM_216905    | Lrig3   | Leucine-rich repeats and immunoglobulin-like domains 3                                           |
| D10      | Rn.93345  | NM_133407    | Map4k3  | Mitogen-activated protein kinase kinase kinase kinase 3                                          |
| D11      | Rn.88085  | NM_031020    | Mapk14  | Mitogen activated protein kinase 14                                                              |
| D12      | Rn.88457  | NM_031622    | Mapk6   | Mitogen-activated protein kinase 6                                                               |
| E01      | Rn.4090   | NM_053829    | Mapk8   | Mitogen-activated protein kinase 8                                                               |
| E02      | Rn.3239   | NM_024374    | Mtpn    | Myotrophin                                                                                       |
| E03      | Rn.12072  | NM_012603    | Myc     | Myelocytomatosis oncogene                                                                        |
| E04      | Rn.81116  | NM_001013096 | Mycn    | V-myc myelocytomatosis viral related oncogene, neuroblastoma derived (avian)                     |
| E05      | Rn.20691  | XM_006224744 | Ncoa3   | Nuclear receptor coactivator 3                                                                   |
| E06      | Rn.46695  | NM_013193    | Nf2     | Neurofibromin 2 (merlin)                                                                         |
| E07      | Rn.90866  | NM_001105839 | Nkiras2 | NFkB inhibitor interacting Ras-like 2                                                            |
| E08      | Rn.104126 | NM_001191882 | Nphp3   | Nephronophthisis 3 (adolescent)                                                                  |

| Position | UniGene   | GenBank      | Symbol   | Description                                                                         |
|----------|-----------|--------------|----------|-------------------------------------------------------------------------------------|
| E09      | Rn.218964 | NM_001113197 | Nr2e1    | Nuclear receptor subfamily 2, group E, member 1                                     |
| E10      | Rn.217722 | NM_080766    | Nras     | Neuroblastoma ras oncogene                                                          |
| E11      | Rn.127830 | NM_173114    | Parm1    | Prostate androgen-regulated mucin-like protein 1                                    |
| E12      | Rn.162662 | NM_001107834 | Pbx3     | Pre-B-cell leukemia homeobox 3                                                      |
| F01      | Rn.21088  | NM_001107430 | Pdpr     | Pyruvate dehydrogenase phosphatase regulatory subunit                               |
| F02      | Rn.148320 | NM_001106015 | Pla2g3   | Phospholipase A2, group III                                                         |
| F03      | N/A       | NM_001108744 | Plxnc1   | Plexin C1                                                                           |
| F04      | Rn.81155  | NM_053999    | Ppp2r2a  | Protein phosphatase 2 (formerly 2A), regulatory subunit B, alpha isoform            |
| F05      | Rn.8012   | NM_001107639 | Prdm1    | PR domain containing 1, with ZNF domain                                             |
| F06      | Rn.101115 | NM_001191604 | Ranbp2   | RAN binding protein 2                                                               |
| F07      | Rn.210995 | NM_053721    | Rasgrf2  | RAS protein-specific guanine nucleotide-releasing factor 2                          |
| F08      | Rn.98798  | NM_001191867 | Raver2   | Ribonucleoprotein, PTB-binding 2                                                    |
| F09      | Rn.103345 | NM_001108586 | Rcn1     | Reticulocalbin 1, EF-hand calcium binding domain                                    |
| F10      | Rn.11418  | NM_013173    | Slc11a2  | Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2 |
| F11      | Rn.163043 | NM_053500    | Slc25a27 | Solute carrier family 25, member 27                                                 |
| F12      | Rn.11763  | NM_031683    | Smc1a    | Structural maintenance of chromosomes 1A                                            |
| G01      | Rn.62929  | NM_001107256 | Socs4    | Suppressor of cytokine signaling 4                                                  |
| G02      | Rn.44402  | NM_012775    | Tgfb1    | Transforming growth factor, beta receptor 1                                         |
| G03      | Rn.14534  | NM_019178    | Tlr4     | Toll-like receptor 4                                                                |
| G04      | Rn.225076 | NM_001191801 | Trim71   | Tripartite motif-containing 71                                                      |
| G05      | Rn.120731 | NM_001109297 | Tusc2    | Tumor suppressor candidate 2                                                        |
| G06      | Rn.2173   | NM_001107585 | Uhrf2    | Ubiquitin-like with PHD and ring finger domains 2                                   |
| G07      | Rn.16359  | NM_001107032 | Usp32    | Ubiquitin specific peptidase 32                                                     |
| G08      | Rn.163358 | NM_001107362 | Wdr37    | WD repeat domain 37                                                                 |
| G09      | Rn.138108 | NM_001105714 | Wnt1     | Wingless-type MMTV integration site family, member 1                                |
| G10      | Rn.219771 | NM_001108102 | Xpot     | Exportin, tRNA (nuclear export receptor for tRNAs)                                  |
| G11      | Rn.23809  | NM_001106657 | Zbtb5    | Zinc finger and BTB domain containing 5                                             |
| G12      | Rn.16048  | NM_001108038 | Zfyve26  | Zinc finger, FYVE domain containing 26                                              |
| H01      | Rn.94978  | NM_031144    | Actb     | Actin, beta                                                                         |
| H02      | Rn.1868   | NM_012512    | B2m      | Beta-2 microglobulin                                                                |
| H03      | Rn.47     | NM_012583    | Hprt1    | Hypoxanthine phosphoribosyltransferase 1                                            |
| H04      | Rn.107896 | NM_017025    | Ldha     | Lactate dehydrogenase A                                                             |
| H05      | Rn.973    | NM_001007604 | Rplp1    | Ribosomal protein, large, P1                                                        |
| H06      | N/A       | U26919       | RGDC     | Rat 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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