

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

## Human miR-17 & miR-20a Targets

Cat. no. 330231 PAHS-6003ZR

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 Human miR-17 & miR-20a Targets RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 hsa-miR-17-5p and hsa-miR-20a-5p target genes. This panel of 84 genes includes currently known experimentally verified plus bioinformatically predicted target genes regulated by hsa-miR-17-5p and hsa-miR-20a-5p. This array also includes target genes regulated by other miRNAs that have the same seed sequence as hsa-miR-17-5p and hsa-miR-20a, including hsa-miR-20b-5p, hsa-miR-93-5p, hsa-miR-106a-5p, hsa-miR-106b-5p, and hsa-miR-519d. 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 miR-17 and miR-20a 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      | Hs.149342 | NM_020661    | AICDA   | Activation-induced cytidine deaminase                                                   |
| A02      | Hs.436055 | NM_021926    | ALX4    | ALX homeobox 4                                                                          |
| A03      | Hs.432945 | NM_152326    | ANKRD9  | Ankyrin repeat domain 9                                                                 |
| A04      | Hs.434980 | NM_000484    | APP     | Amyloid beta (A4) precursor protein                                                     |
| A05      | Hs.138860 | NM_004308    | ARHGAP1 | Rho GTPase activating protein 1                                                         |
| A06      | Hs.533633 | NM_016374    | ARID4B  | AT rich interactive domain 4B (RBP1-like)                                               |
| A07      | Hs.22109  | NM_014952    | BAHD1   | Bromo adjacent homology domain containing 1                                             |
| A08      | Hs.533336 | NM_012342    | BAMBI   | BMP and activin membrane-bound inhibitor homolog (Xenopus laevis)                       |
| A09      | Hs.150749 | NM_000633    | BCL2    | B-cell CLL/lymphoma 2                                                                   |
| A10      | Hs.469658 | NM_006538    | BCL2L1  | BCL2-like 11 (apoptosis facilitator)                                                    |
| A11      | Hs.471119 | NM_001204    | BMPR2   | Bone morphogenetic protein receptor, type II (serine/threonine kinase)                  |
| A12      | Hs.646490 | NM_004330    | BNIP2   | BCL2/adenovirus E1B 19kDa interacting protein 2                                         |
| B01      | Hs.490203 | NM_004342    | CALD1   | Caldesmon 1                                                                             |
| B02      | Hs.234355 | NM_023925    | CAPRIN2 | Caprin family member 2                                                                  |
| B03      | Hs.72918  | NM_002981    | CCL1    | Chemokine (C-C motif) ligand 1                                                          |
| B04      | Hs.523852 | NM_053056    | CCND1   | Cyclin D1                                                                               |
| B05      | Hs.376071 | NM_001759    | CCND2   | Cyclin D2                                                                               |
| B06      | Hs.13291  | NM_004354    | CCNG2   | Cyclin G2                                                                               |
| B07      | Hs.370771 | NM_000389    | CDKN1A  | Cyclin-dependent kinase inhibitor 1A (p21, Cip1)                                        |
| B08      | Hs.699247 | NM_016441    | CRIM1   | Cysteine rich transmembrane BMP regulator 1 (chordin-like)                              |
| B09      | Hs.125039 | NM_021151    | CROT    | Carnitine O-octanoyltransferase                                                         |
| B10      | Hs.434993 | NM_016544    | DNAJC27 | DnaJ (Hsp40) homolog, subfamily C, member 27                                            |
| B11      | Hs.654652 | NM_014705    | DOCK4   | Dedicator of cytokinesis 4                                                              |
| B12      | Hs.654393 | NM_005225    | E2F1    | E2F transcription factor 1                                                              |
| C01      | Hs.46523  | NM_005230    | ELK3    | ELK3, ETS-domain protein (SRF accessory protein 2)                                      |
| C02      | Hs.208124 | NM_000125    | ESR1    | Estrogen receptor 1                                                                     |
| C03      | Hs.567582 | NM_024735    | FBXO31  | F-box protein 31                                                                        |
| C04      | Hs.498160 | NM_003272    | GPR137B | G protein-coupled receptor 137B                                                         |
| C05      | Hs.597216 | NM_001530    | HIF1A   | Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor) |
| C06      | Hs.201918 | NM_005734    | HIPK3   | Homeodomain interacting protein kinase 3                                                |
| C07      | Hs.702021 | NM_006597    | HSPA8   | Heat shock 70kDa protein 8                                                              |
| C08      | Hs.643447 | NM_000201    | ICAM1   | Intercellular adhesion molecule 1                                                       |
| C09      | Hs.193717 | NM_000572    | IL10    | Interleukin 10                                                                          |
| C10      | Hs.592171 | NM_002214    | ITGB8   | Integrin, beta 8                                                                        |
| C11      | Hs.207538 | NM_002227    | JAK1    | Janus kinase 1                                                                          |
| C12      | Hs.533055 | NM_003884    | KAT2B   | K(lysine) acetyltransferase 2B                                                          |
| D01      | Hs.594238 | NM_002266    | KPNA2   | Karyopherin alpha 2 (RAG cohort 1, importin alpha 1)                                    |
| D02      | Hs.713539 | NM_006301    | MAP3K12 | Mitogen-activated protein kinase kinase kinase 12                                       |
| D03      | Hs.145605 | NM_006609    | MAP3K2  | Mitogen-activated protein kinase kinase kinase 2                                        |
| D04      | Hs.186486 | NM_005923    | MAP3K5  | Mitogen-activated protein kinase kinase kinase 5                                        |
| D05      | Hs.432453 | NM_005204    | MAP3K8  | Mitogen-activated protein kinase kinase kinase 8                                        |
| D06      | Hs.485233 | NM_001315    | MAPK14  | Mitogen-activated protein kinase 14                                                     |
| D07      | Hs.314327 | NM_005920    | MEF2D   | Myocyte enhancer factor 2D                                                              |
| D08      | Hs.484738 | NM_013262    | MYLIP   | Myosin regulatory light chain interacting protein                                       |
| D09      | Hs.592142 | NM_181659    | NCOA3   | Nuclear receptor coactivator 3                                                          |
| D10      | Hs.171061 | NM_002519    | NPAT    | Nuclear protein, ataxia-telangiectasia locus                                            |
| D11      | Hs.591610 | NM_001031716 | OBFC2A  | Oligonucleotide/oligosaccharide-binding fold containing 2A                              |
| D12      | Hs.32539  | NM_177990    | PAK7    | P21 protein (Cdc42/Rac)-activated kinase 7                                              |
| E01      | Hs.428027 | NM_006195    | PBX3    | Pre-B-cell leukemia homeobox 3                                                          |
| E02      | Hs.445711 | NM_000922    | PDE3B   | Phosphodiesterase 3B, cGMP-inhibited                                                    |
| E03      | Hs.181272 | NM_000297    | PKD2    | Polycystic kidney disease 2 (autosomal dominant)                                        |
| E04      | Hs.241517 | NM_199420    | POLQ    | Polymerase (DNA directed), theta                                                        |
| E05      | Hs.103110 | NM_005036    | PPARA   | Peroxisome proliferator-activated receptor alpha                                        |
| E06      | Hs.162646 | NM_015869    | PPARG   | Peroxisome proliferator-activated receptor gamma                                        |
| E07      | Hs.500466 | NM_000314    | PTEN    | Phosphatase and tensin homolog                                                          |
| E08      | Hs.160871 | NM_002848    | PTPRO   | Protein tyrosine phosphatase, receptor type, O                                          |

| Position | UniGene   | GenBank      | Symbol     | Description                                                                                                  |
|----------|-----------|--------------|------------|--------------------------------------------------------------------------------------------------------------|
| E09      | Hs.270074 | NM_001025300 | RAB12      | RAB12, member RAS oncogene family                                                                            |
| E10      | Hs.408528 | NM_000321    | RB1        | Retinoblastoma 1                                                                                             |
| E11      | Hs.207745 | NM_002895    | RBL1       | Retinoblastoma-like 1 (p107)                                                                                 |
| E12      | Hs.513609 | NM_005611    | RBL2       | Retinoblastoma-like 2 (p130)                                                                                 |
| F01      | Hs.510225 | NM_004755    | RPS6KA5    | Ribosomal protein S6 kinase, 90kDa, polypeptide 5                                                            |
| F02      | Hs.149261 | NM_001754    | RUNX1      | Runt-related transcription factor 1                                                                          |
| F03      | Hs.89546  | NM_000450    | SELE       | Selectin E                                                                                                   |
| F04      | Hs.75862  | NM_005359    | SMAD4      | SMAD family member 4                                                                                         |
| F05      | Hs.189329 | NM_020429    | SMURF1     | SMAD specific E3 ubiquitin protein ligase 1                                                                  |
| F06      | Hs.337040 | NM_152996    | ST6GALNAC3 | ST6 (alpha-N-acetyl-neuraminy-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 3 |
| F07      | Hs.463059 | NM_003150    | STAT3      | Signal transducer and activator of transcription 3 (acute-phase response factor)                             |
| F08      | Hs.516297 | NM_031283    | TCF7L1     | Transcription factor 7-like 1 (T-cell specific, HMG-box)                                                     |
| F09      | Hs.604277 | NM_003242    | TGFBR2     | Transforming growth factor, beta receptor II (70/80kDa)                                                      |
| F10      | Hs.415839 | NM_003809    | TNFSF12    | Tumor necrosis factor (ligand) superfamily, member 12                                                        |
| F11      | Hs.329327 | NM_025235    | TNKS2      | Tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase 2                                          |
| F12      | Hs.700624 | NM_033285    | TP53INP1   | Tumor protein p53 inducible nuclear protein 1                                                                |
| G01      | Hs.515094 | NM_004240    | TRIP10     | Thyroid hormone receptor interactor 10                                                                       |
| G02      | Hs.517981 | NM_007275    | TUSC2      | Tumor suppressor candidate 2                                                                                 |
| G03      | Hs.458499 | NM_006537    | USP3       | Ubiquitin specific peptidase 3                                                                               |
| G04      | Hs.73793  | NM_003376    | VEGFA      | Vascular endothelial growth factor A                                                                         |
| G05      | Hs.370422 | NM_003383    | VLDLR      | Very low density lipoprotein receptor                                                                        |
| G06      | Hs.249441 | NM_003390    | WEE1       | WEE1 homolog (S. pombe)                                                                                      |
| G07      | Hs.194148 | NM_005433    | YES1       | V-src-1 Yamaguchi sarcoma viral oncogene homolog 1                                                           |
| G08      | Hs.591384 | NM_015898    | ZBTB7A     | Zinc finger and BTB domain containing 7A                                                                     |
| G09      | Hs.431009 | NM_012082    | ZFPM2      | Zinc finger protein, multitype 2                                                                             |
| G10      | Hs.98041  | NM_015346    | ZFYVE26    | Zinc finger, FYVE domain containing 26                                                                       |
| G11      | Hs.592591 | NM_021964    | ZNF148     | Zinc finger protein 148                                                                                      |
| G12      | Hs.371794 | NM_021035    | ZNFX1      | Zinc finger, NFX1-type containing 1                                                                          |
| H01      | Hs.520640 | NM_001101    | ACTB       | Actin, beta                                                                                                  |
| H02      | Hs.534255 | NM_004048    | B2M        | Beta-2-microglobulin                                                                                         |
| H03      | Hs.592355 | NM_002046    | GAPDH      | Glyceraldehyde-3-phosphate dehydrogenase                                                                     |
| H04      | Hs.412707 | NM_000194    | HPRT1      | Hypoxanthine phosphoribosyltransferase 1                                                                     |
| H05      | Hs.546285 | NM_001002    | RPLP0      | Ribosomal protein, large, P0                                                                                 |
| H06      | N/A       | SA_00105     | HGDC       | Human 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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