

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Human Transcription Factors

Cat. no. 330231 PAHS-075ZA

For pathway expression analysis

| Format | For use with the following real-time cyclers |
|--|---|
| RT ² Profiler PCR Array, Format A | Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800 |
| RT ² Profiler PCR Array, Format C | Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block) |
| RT ² Profiler PCR Array, Format D | Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000® |
| RT ² Profiler PCR Array, Format E | Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™ |
| RT ² Profiler PCR Array, Format F | Roche® LightCycler® 480 (96-well block) |
| RT ² Profiler PCR Array, Format G | Roche LightCycler 480 (384-well block) |
| RT ² Profiler PCR Array, Format H | Fluidigm® BioMark™ |



Sample & Assay Technologies

Description

The Human Transcription Factors RT² Profiler PCR Array profiles the expression of 84 genes that directly control when, where, and the extent to which genes are expressed. The array includes transcription factors downstream of signaling from cytokines and chemokines and growth factors like BMP, EGF, EPO, IGF, insulin, PDGF, TGF β , TPO, and VEGF. Signaling from androgen, B-cell, G-protein coupled, T-cell, and Toll-Like receptors activate transcription factors represented on this array. Target transcription factors in signal transduction pathways like JAK / STAT, JNK and other MAP Kinases, NF κ B, Notch, and WNT are also included in this array. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of transcription factors with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

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

Note: Ensure that you have the correct RT² Profiler PCR Array format for your real-time cycler (see table above).

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

Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----------|-------|-------|--------|--------|--------|--------|-------|--------|--------|-------|---------|--------|
| A | AR | ARNT | ATF1 | ATF2 | ATF3 | ATF4 | CEBPA | CEBPB | CEBPG | CREB1 | CREBBP | CTNNB1 |
| B | DR1 | E2F1 | E2F6 | EGR1 | ELK1 | ESR1 | ETS1 | ETS2 | FOS | FOXA2 | FOXP1 | FOXO1 |
| C | GATA1 | GATA2 | GATA3 | GTF2B | GTF2F1 | HAND1 | HAND2 | HDAC1 | HIF1A | HNF1A | HNF4A | HOXA5 |
| D | HSF1 | ID1 | IRF1 | JUN | JUNB | JUND | MAX | MEF2A | MEF2C | MYB | MYC | MYF5 |
| E | MYOD1 | NFAT5 | NFATC1 | NFATC2 | NFATC3 | NFATC4 | NFKB1 | NFYB | NR3C1 | PAX6 | POU2AF1 | PPARA |
| F | PPARG | RB1 | REL | RELA | RELB | SMAD1 | SMAD4 | SMAD5 | SMAD9 | SP1 | SP3 | STAT1 |
| G | STAT2 | STAT3 | STAT4 | STAT5A | STAT5B | STAT6 | TBP | TCF7L2 | TFAP2A | TGIF1 | TP53 | YY1 |
| H | ACTB | B2M | GAPDH | HPRT1 | RPLP0 | HGDC | RTC | RTC | RTC | PPC | PPC | PPC |

Gene table: RT² Profiler PCR Array

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|-----------|--------|---|
| A01 | Hs.496240 | NM_000044 | AR | Androgen receptor |
| A02 | Hs.632446 | NM_001668 | ARNT | Aryl hydrocarbon receptor nuclear translocator |
| A03 | Hs.648565 | NM_005171 | ATF1 | Activating transcription factor 1 |
| A04 | Hs.592510 | NM_001880 | ATF2 | Activating transcription factor 2 |
| A05 | Hs.460 | NM_001674 | ATF3 | Activating transcription factor 3 |
| A06 | Hs.496487 | NM_001675 | ATF4 | Activating transcription factor 4 (tax-responsive enhancer element B67) |
| A07 | Hs.699463 | NM_004364 | CEBPA | CCAAT/enhancer binding protein (C/EBP), alpha |
| A08 | Hs.517106 | NM_005194 | CEBPB | CCAAT/enhancer binding protein (C/EBP), beta |
| A09 | Hs.429666 | NM_001806 | CEBPG | CCAAT/enhancer binding protein (C/EBP), gamma |
| A10 | Hs.516646 | NM_004379 | CREB1 | CAMP responsive element binding protein 1 |
| A11 | Hs.459759 | NM_004380 | CREBBP | CREB binding protein |
| A12 | Hs.476018 | NM_001904 | CTNNB1 | Catenin (cadherin-associated protein), beta 1, 88kDa |
| B01 | Hs.348418 | NM_001938 | DR1 | Down-regulator of transcription 1, TBP-binding (negative cofactor 2) |
| B02 | Hs.654393 | NM_005225 | E2F1 | E2F transcription factor 1 |
| B03 | Hs.603093 | NM_198256 | E2F6 | E2F transcription factor 6 |
| B04 | Hs.326035 | NM_001964 | EGR1 | Early growth response 1 |
| B05 | Hs.181128 | NM_005229 | ELK1 | ELK1, member of ETS oncogene family |
| B06 | Hs.208124 | NM_000125 | ESR1 | Estrogen receptor 1 |
| B07 | Hs.369438 | NM_005238 | ETS1 | V-ets erythroblastosis virus E26 oncogene homolog 1 (avian) |
| B08 | Hs.644231 | NM_005239 | ETS2 | V-Ets erythroblastosis virus E26 oncogene homolog 2 (avian) |
| B09 | Hs.728789 | NM_005252 | FOS | FBJ murine osteosarcoma viral oncogene homolog |
| B10 | Hs.155651 | NM_021784 | FOXA2 | Forkhead box A2 |
| B11 | Hs.695962 | NM_005249 | FOXP1 | Forkhead box G1 |
| B12 | Hs.370666 | NM_002015 | FOXO1 | Forkhead box O1 |
| C01 | Hs.765 | NM_002049 | GATA1 | GATA binding protein 1 (globin transcription factor 1) |
| C02 | Hs.367725 | NM_032638 | GATA2 | GATA binding protein 2 |
| C03 | Hs.524134 | NM_002051 | GATA3 | GATA binding protein 3 |
| C04 | Hs.481852 | NM_001514 | GTF2B | General transcription factor IIB |
| C05 | Hs.68257 | NM_002096 | GTF2F1 | General transcription factor IIF, polypeptide 1, 74kDa |
| C06 | Hs.152531 | NM_004821 | HAND1 | Heart and neural crest derivatives expressed 1 |
| C07 | Hs.388245 | NM_021973 | HAND2 | Heart and neural crest derivatives expressed 2 |
| C08 | Hs.88556 | NM_004964 | HDAC1 | Histone deacetylase 1 |
| C09 | Hs.597216 | NM_001530 | HIF1A | Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor) |
| C10 | Hs.654455 | NM_000545 | HNF1A | HNF1 homeobox A |
| C11 | Hs.116462 | NM_178849 | HNF4A | Hepatocyte nuclear factor 4, alpha |
| C12 | Hs.655218 | NM_019102 | HOXA5 | Homeobox A5 |
| D01 | Hs.530227 | NM_005526 | HSF1 | Heat shock transcription factor 1 |
| D02 | Hs.504609 | NM_002165 | ID1 | Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein |
| D03 | Hs.436061 | NM_002198 | IRF1 | Interferon regulatory factor 1 |
| D04 | Hs.714791 | NM_002228 | JUN | Jun proto-oncogene |
| D05 | Hs.25292 | NM_002229 | JUNB | Jun B proto-oncogene |
| D06 | Hs.2780 | NM_005354 | JUND | Jun D proto-oncogene |
| D07 | Hs.285354 | NM_002382 | MAX | MYC associated factor X |
| D08 | Hs.268675 | NM_005587 | MEF2A | Myocyte enhancer factor 2A |

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|-----------|---------|--|
| D09 | Hs.653394 | NM_002397 | MEF2C | Myocyte enhancer factor 2C |
| D10 | Hs.654446 | NM_005375 | MYB | V-myb myeloblastosis viral oncogene homolog (avian) |
| D11 | Hs.202453 | NM_002467 | MYC | V-myc myelocytomatosis viral oncogene homolog (avian) |
| D12 | Hs.178023 | NM_005593 | MYF5 | Myogenic factor 5 |
| E01 | Hs.181768 | NM_002478 | MYOD1 | Myogenic differentiation 1 |
| E02 | Hs.371987 | NM_006599 | NFAT5 | Nuclear factor of activated T-cells 5, tonicity-responsive |
| E03 | Hs.534074 | NM_172390 | NFATC1 | Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1 |
| E04 | Hs.713650 | NM_012340 | NFATC2 | Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 |
| E05 | Hs.632209 | NM_004555 | NFATC3 | Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3 |
| E06 | Hs.77810 | NM_004554 | NFATC4 | Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4 |
| E07 | Hs.654408 | NM_003998 | NFKB1 | Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 |
| E08 | Hs.84928 | NM_006166 | NFYB | Nuclear transcription factor Y, beta |
| E09 | Hs.122926 | NM_000176 | NR3C1 | Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) |
| E10 | Hs.270303 | NM_000280 | PAX6 | Paired box 6 |
| E11 | Hs.654525 | NM_006235 | POU2AF1 | POU class 2 associating factor 1 |
| E12 | Hs.103110 | NM_005036 | PPARA | Peroxisome proliferator-activated receptor alpha |
| F01 | Hs.162646 | NM_015869 | PPARG | Peroxisome proliferator-activated receptor gamma |
| F02 | Hs.408528 | NM_000321 | RB1 | Retinoblastoma 1 |
| F03 | Hs.631886 | NM_002908 | REL | V-rel reticuloendotheliosis viral oncogene homolog (avian) |
| F04 | Hs.502875 | NM_021975 | RELA | V-rel reticuloendotheliosis viral oncogene homolog A (avian) |
| F05 | Hs.654402 | NM_006509 | RELB | V-rel reticuloendotheliosis viral oncogene homolog B |
| F06 | Hs.604588 | NM_005900 | SMAD1 | SMAD family member 1 |
| F07 | Hs.75862 | NM_005359 | SMAD4 | SMAD family member 4 |
| F08 | Hs.167700 | NM_005903 | SMAD5 | SMAD family member 5 |
| F09 | Hs.123119 | NM_005905 | SMAD9 | SMAD family member 9 |
| F10 | Hs.620754 | NM_138473 | SP1 | Sp1 transcription factor |
| F11 | Hs.531587 | NM_003111 | SP3 | Sp3 transcription factor |
| F12 | Hs.642990 | NM_007315 | STAT1 | Signal transducer and activator of transcription 1, 91kDa |
| G01 | Hs.530595 | NM_005419 | STAT2 | Signal transducer and activator of transcription 2, 113kDa |
| G02 | Hs.463059 | NM_003150 | STAT3 | Signal transducer and activator of transcription 3 (acute-phase response factor) |
| G03 | Hs.80642 | NM_003151 | STAT4 | Signal transducer and activator of transcription 4 |
| G04 | Hs.437058 | NM_003152 | STAT5A | Signal transducer and activator of transcription 5A |
| G05 | Hs.595276 | NM_012448 | STAT5B | Signal transducer and activator of transcription 5B |
| G06 | Hs.524518 | NM_003153 | STAT6 | Signal transducer and activator of transcription 6, interleukin-4 induced |
| G07 | Hs.590872 | NM_003194 | TBP | TATA box binding protein |
| G08 | Hs.593995 | NM_030756 | TCF7L2 | Transcription factor 7-like 2 (T-cell specific, HMG-box) |
| G09 | Hs.519880 | NM_003220 | TFAP2A | Transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha) |
| G10 | Hs.373550 | NM_003244 | TGIF1 | TGFB-induced factor homeobox 1 |
| G11 | Hs.654481 | NM_000546 | TP53 | Tumor protein p53 |
| G12 | Hs.388927 | NM_003403 | YY1 | YY1 transcription factor |
| 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, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT² SYBR[®] Green qPCR Mastermixes for PCR.

| Product | Contents | Cat. no. |
|--|---|----------|
| RT ² First Strand Kit (12) | Enzymes and reagents for cDNA synthesis | 330401 |
| RT ² SYBR Green qPCR Mastermix (2)* | For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers | 330500 |
| RT ² SYBR Green ROX™ qPCR Mastermix (2)* | For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800 | 330520 |
| RT ² SYBR Green Fluor qPCR Mastermix (2)* | For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2 | 330510 |

* Larger kit sizes available; please inquire.

RT² Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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