

RT² Profiler PCR Array (Rotor-Gene® Format)

Human GPCR Signaling PathwayFinder

Cat. no. 330231 PAHS-071ZR

For pathway expression analysis

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

Description

The Human G-Protein-Coupled Receptor Signaling PathwayFinder RT² Profiler PCR Array profiles the expression of 84 genes representative of and involved in GPCR-mediated signal transduction pathways. G-protein Coupled Receptors (GPCRs) that are represented on this array include bioactive lipid receptors, metabotropic glutamate receptors (mGluRs), GABA-B-like receptors, rhodopsin-like receptors, and secretin-like receptors. Members of the intricate network of intracellular signaling pathways involved in GPCR-mediated signal transduction are also represented on this array including the cAMP / PKA Pathway, Calcium / PKC Pathway, Calcium / NFAT Pathway, PLC Pathway, Protein Tyrosine Kinase Pathway, PKC / MEK Pathway, p43 / p44MAP Pathway, p38 MAP Pathway, PI-3 Kinase Pathway, NO-cGMP Pathway, Rho Pathway, NFκB Pathway and Jak / Stat Pathway. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to GPCR-mediated signaling with this array.

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

Shipping and storage

RT² 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 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

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: RT² Profiler PCR Array

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|-----------|---------|---|
| A01 | Hs.655144 | NM_183357 | ADCY5 | Adenylate cyclase 5 |
| A02 | Hs.197029 | NM_000675 | ADORA2A | Adenosine A2a receptor |
| A03 | Hs.99913 | NM_000684 | ADRB1 | Adrenergic, beta-1-, receptor |
| A04 | Hs.591251 | NM_000024 | ADRB2 | Adrenergic, beta-2-, receptor, surface |
| A05 | Hs.19383 | NM_000029 | AGT | Angiotensinogen (serpin peptidase inhibitor, clade A, member 8) |
| A06 | Hs.728754 | NM_031850 | AGTR1 | Angiotensin II receptor, type 1 |
| A07 | Hs.405348 | NM_000686 | AGTR2 | Angiotensin II receptor, type 2 |
| A08 | Hs.464438 | NM_020350 | AGTRAP | Angiotensin II receptor-associated protein |
| A09 | Hs.525622 | NM_005163 | AKT1 | V-akt murine thymoma viral oncogene homolog 1 |
| A10 | Hs.503284 | NM_004041 | ARRB1 | Arrestin, beta 1 |
| A11 | Hs.435811 | NM_004313 | ARRB2 | Arrestin, beta 2 |
| A12 | Hs.194654 | NM_001702 | BAI1 | Brain-specific angiogenesis inhibitor 1 |
| B01 | Hs.150749 | NM_000633 | BCL2 | B-cell CLL/lymphoma 2 |
| B02 | Hs.516966 | NM_138578 | BCL2L1 | BCL2-like 1 |
| B03 | Hs.489127 | NM_001742 | CALCR | CALCITONIN RECEPTOR |
| B04 | Hs.470882 | NM_005795 | CALCRL | Calcitonin receptor-like |
| B05 | Hs.435615 | NM_000388 | CASR | Calcium-sensing receptor |
| B06 | Hs.303649 | NM_002982 | CCL2 | Chemokine (C-C motif) ligand 2 |
| B07 | Hs.75703 | NM_002984 | CCL4 | Chemokine (C-C motif) ligand 4 |
| B08 | Hs.523852 | NM_053056 | CCND1 | Cyclin D1 |
| B09 | Hs.244723 | NM_001238 | CCNE1 | Cyclin E1 |
| B10 | Hs.567387 | NM_057749 | CCNE2 | Cyclin E2 |
| B11 | Hs.370771 | NM_000389 | CDKN1A | Cyclin-dependent kinase inhibitor 1A (p21, Cip1) |
| B12 | Hs.238990 | NM_004064 | CDKN1B | Cyclin-dependent kinase inhibitor 1B (p27, Kip1) |
| C01 | Hs.390736 | NM_003879 | CFLAR | CASP8 and FADD-like apoptosis regulator |
| C02 | Hs.172928 | NM_000088 | COL1A1 | Collagen, type I, alpha 1 |
| C03 | Hs.417628 | NM_004382 | CRHR1 | Corticotropin releasing hormone receptor 1 |
| C04 | Hs.729970 | NM_001883 | CRHR2 | Corticotropin releasing hormone receptor 2 |
| C05 | Hs.591346 | NM_001901 | CTGF | Connective tissue growth factor |
| C06 | Hs.260074 | NM_000103 | CYP19A1 | Cytochrome P450, family 19, subfamily A, polypeptide 1 |
| C07 | Hs.2624 | NM_000794 | DRD1 | Dopamine receptor D1 |
| C08 | Hs.73893 | NM_000795 | DRD2 | Dopamine receptor D2 |
| C09 | Hs.91448 | NM_007026 | DUSP14 | Dual specificity phosphatase 14 |
| C10 | Hs.511899 | NM_001955 | EDN1 | Endothelin 1 |
| C11 | Hs.326035 | NM_001964 | EGR1 | Early growth response 1 |
| C12 | Hs.181128 | NM_005229 | ELK1 | ELK1, member of ETS oncogene family |
| D01 | Hs.497520 | NM_001973 | ELK4 | ELK4, ETS-domain protein (SRF accessory protein 1) |
| D02 | Hs.284244 | NM_002006 | FGF2 | Fibroblast growth factor 2 (basic) |
| D03 | Hs.728789 | NM_005252 | FOS | FBJ murine osteosarcoma viral oncogene homolog |
| D04 | Hs.666366 | NM_003857 | GALR2 | GALANIN RECEPTOR 2 |
| D05 | Hs.208 | NM_000160 | GCGR | Glucagon receptor |
| D06 | Hs.269782 | NM_002072 | GNAQ | Guanine nucleotide binding protein (G protein), q polypeptide |
| D07 | Hs.125898 | NM_080425 | GNAS | GNAS complex locus |
| D08 | Hs.32945 | NM_000838 | GRM1 | Glutamate receptor, metabotropic 1 |
| D09 | Hs.121510 | NM_000839 | GRM2 | Glutamate receptor, metabotropic 2 |
| D10 | Hs.654847 | NM_000841 | GRM4 | Glutamate receptor, metabotropic 4 |
| D11 | Hs.147361 | NM_000842 | GRM5 | Glutamate receptor, metabotropic 5 |
| D12 | Hs.606393 | NM_000844 | GRM7 | Glutamate receptor, metabotropic 7 |
| E01 | Hs.643447 | NM_000201 | ICAM1 | Intercellular adhesion molecule 1 |
| E02 | Hs.126256 | NM_000576 | IL1B | Interleukin 1, beta |
| E03 | Hs.701982 | NM_000877 | IL1R1 | Interleukin 1 receptor, type I |
| E04 | Hs.25333 | NM_004633 | IL1R2 | Interleukin 1 receptor, type II |
| E05 | Hs.89679 | NM_000586 | IL2 | Interleukin 2 |
| E06 | Hs.714791 | NM_002228 | JUN | Jun proto-oncogene |
| E07 | Hs.25292 | NM_002229 | JUNB | Jun B proto-oncogene |
| E08 | Hs.468490 | NM_000233 | LHCGR | Luteinizing hormone/choriogonadotropin receptor |
| E09 | Hs.126667 | NM_057159 | LPAR1 | Lysophosphatidic acid receptor 1 |

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|-----------|----------|---|
| E10 | Hs.122575 | NM_004720 | LPAR2 | Lysophosphatidic acid receptor 2 |
| E11 | Hs.285354 | NM_002382 | MAX | MYC associated factor X |
| E12 | Hs.297413 | NM_004994 | MMP9 | Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) |
| F01 | Hs.202453 | NM_002467 | MYC | V-myc myelocytomatosis viral oncogene homolog (avian) |
| F02 | Hs.709191 | NM_000625 | NOS2 | Nitric oxide synthase 2, inducible |
| F03 | Hs.372 | NM_000911 | OPRD1 | Opioid receptor, delta 1 |
| F04 | Hs.106795 | NM_000912 | OPRK1 | Opioid receptor, kappa 1 |
| F05 | Hs.459691 | NM_002613 | PDPK1 | 3-phosphoinositide dependent protein kinase-1 |
| F06 | Hs.32942 | NM_002649 | PIK3CG | Phosphoinositide-3-kinase, catalytic, gamma polypeptide |
| F07 | Hs.531704 | NM_002737 | PKCA | Protein kinase C, alpha |
| F08 | Hs.306831 | NM_000953 | PTGDR | Prostaglandin D2 receptor (DP) |
| F09 | Hs.196384 | NM_000963 | PTGS2 | Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) |
| F10 | Hs.1019 | NM_000316 | PTH1R | Parathyroid hormone 1 receptor |
| F11 | Hs.78944 | NM_002923 | RGS2 | Regulator of G-protein signaling 2, 24kDa |
| F12 | Hs.247565 | NM_000539 | RHO | Rhodopsin |
| G01 | Hs.154210 | NM_001400 | S1PR1 | Sphingosine-1-phosphate receptor 1 |
| G02 | Hs.655405 | NM_004230 | S1PR2 | Sphingosine-1-phosphate receptor 2 |
| G03 | Hs.585118 | NM_005226 | S1PR3 | Sphingosine-1-phosphate receptor 3 |
| G04 | Hs.42091 | NM_002980 | SCTR | Secretin receptor |
| G05 | Hs.414795 | NM_000602 | SERPINE1 | Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1 |
| G06 | Hs.50640 | NM_003745 | SOCS1 | Suppressor of cytokine signaling 1 |
| G07 | Hs.241570 | NM_000594 | TNF | Tumor necrosis factor |
| G08 | Hs.160411 | NM_000369 | TSHR | Thyroid stimulating hormone receptor |
| G09 | Hs.249211 | NM_021833 | UCP1 | Uncoupling protein 1 (mitochondrial, proton carrier) |
| G10 | Hs.109225 | NM_001078 | VCAM1 | Vascular cell adhesion molecule 1 |
| G11 | Hs.73793 | NM_003376 | VEGFA | Vascular endothelial growth factor A |
| G12 | Hs.492407 | NM_003406 | YWHAZ | Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide |
| 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 ROX [™] 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.

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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