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

Mouse Signal Transduction PathwayFinder

Cat. no. 330231 PAMM-014ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Mouse Signal Transduction PathwayFinder RT² Profiler PCR Array profiles the expression of 84 key genes responsive to signal transduction pathway activation or inhibition. Cellular signaling forms a complex network of gene interactions involving multiple signal transduction pathways. Each pathway ultimately increases or decreases the expression of its target genes resulting in alteration of cellular processes. Changes in target gene expression suggest signaling pathway activation or inhibition. However, gene expression results in the same pathway vary widely, depending on model systems and experimental conditions. Therefore, multiple target genes from each pathway should be examined to ensure accurate signaling pathway identification in a variety of model systems. In addition, analyzing multiple pathways simultaneously tests for signaling pathway crosstalk. This array includes target genes for 10 commonly studied signal transduction pathways, including pathways important for developmental, immunological, metabolic, and stress-activated processes. Results obtained with this array can suggest pathways that are potentially activated or inhibited by an experimental stimulus for further follow-up studies. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in cellular signaling 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	Acsl3	Acsl4	Acsl5	Adm	Arnt	Atf4	Axin2	Bax	Bbc3	Bcl2	Bcl2a1a	Bcl2l1
B	Birc3	Bmp2	Bmp4	Btg2	Car9	Ccl5	Ccnd1	Ccnd2	Cdkn1a	Cdkn1b	Cebpd	Cpt2
C	Csf1	Dab2	Egfr	Emp1	Epo	Fabp1	Fas	Fcer2a	Fosl1	Fth1	Gadd45a	Gadd45b
D	Gata3	Gclc	Gclm	Gsr	Herpud1	Hes1	Hes5	Hey1	Hey2	Heyl	Hmox1	Icam1
E	Id1	Ifng	Ifrd1	Irf1	Jag1	Ldha	Lfng	Lrg1	Mcl1	Mmp7	Myc	Notch1
F	Nqo1	Olr1	Pcna	Ppard	Ptch1	Rb1	Serpine1	Slc27a4	Slc2a1	Socs3	Sorbs1	Sqstm1
G	Stat1	Tnf	Tnfsf10	Txn1	Txnrd1	Vegfa	Wisp1	Wnt1	Wnt2b	Wnt3a	Wnt5a	Wnt6
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.427252	NM_001033606	Acsl3	Acyl-CoA synthetase long-chain family member 3
A02	Mm.391337	NM_019477	Acsl4	Acyl-CoA synthetase long-chain family member 4
A03	Mm.292056	NM_027976	Acsl5	Acyl-CoA synthetase long-chain family member 5
A04	Mm.1408	NM_009627	Adm	Adrenomedullin
A05	Mm.250265	NM_009709	Arnt	Aryl hydrocarbon receptor nuclear translocator
A06	Mm.641	NM_009716	Atf4	Activating transcription factor 4
A07	Mm.71710	NM_015732	Axin2	Axin2
A08	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A09	Mm.7660	NM_133234	Bbc3	BCL2 binding component 3
A10	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A11	Mm.425593	NM_009742	Bcl2a1a	B-cell leukemia/lymphoma 2 related protein A1a
A12	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
B01	Mm.2026	NM_007464	Birc3	Baculoviral IAP repeat-containing 3
B02	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
B03	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
B04	Mm.392646	NM_007570	Btg2	B-cell translocation gene 2, anti-proliferative
B05	Mm.283682	NM_139305	Car9	Carbonic anhydrase 9
B06	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B07	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B08	Mm.333406	NM_009829	Ccnd2	Cyclin D2
B09	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B10	Mm.2958	NM_009875	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
B11	Mm.347407	NM_007679	Cebpd	CCAAT/enhancer binding protein (C/EBP), delta
B12	Mm.307620	NM_009949	Cpt2	Carnitine palmitoyltransferase 2
C01	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
C02	Mm.240830	NM_023118	Dab2	Disabled homolog 2 (Drosophila)
C03	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
C04	Mm.182785	NM_010128	Emp1	Epithelial membrane protein 1
C05	Mm.349116	NM_007942	Epo	Erythropoietin
C06	Mm.22126	NM_017399	Fabp1	Fatty acid binding protein 1, liver
C07	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
C08	Mm.1233	NM_013517	Fcer2a	Fc receptor, IgE, low affinity II, alpha polypeptide
C09	Mm.6215	NM_010235	Fosl1	Fos-like antigen 1
C10	Mm.1776	NM_010239	Fth1	Ferritin heavy chain 1
C11	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha
C12	Mm.1360	NM_008655	Gadd45b	Growth arrest and DNA-damage-inducible 45 beta
D01	Mm.313866	NM_008091	Gata3	GATA binding protein 3
D02	Mm.485389	NM_010295	Gclc	Glutamate-cysteine ligase, catalytic subunit
D03	Mm.292676	NM_008129	Gclm	Glutamate-cysteine ligase, modifier subunit
D04	Mm.283573	NM_010344	Gsr	Glutathione reductase
D05	Mm.29151	NM_022331	Herpud1	Homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1
D06	Mm.390859	NM_008235	Hes1	Hairy and enhancer of split 1 (Drosophila)
D07	Mm.137268	NM_010419	Hes5	Hairy and enhancer of split 5 (Drosophila)
D08	Mm.29581	NM_010423	Hey1	Hairy/enhancer-of-split related with YRPW motif 1

Position	UniGene	GenBank	Symbol	Description
D09	Mm.103573	NM_013904	Hey2	Hairy/enhancer-of-split related with YRPW motif 2
D10	Mm.103615	NM_013905	Heyl	Hairy/enhancer-of-split related with YRPW motif-like
D11	Mm.276389	NM_010442	Hmox1	Heme oxygenase (decycling) 1
D12	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
E01	Mm.444	NM_010495	Id1	Inhibitor of DNA binding 1
E02	Mm.240327	NM_008337	Ifng	Interferon gamma
E03	Mm.168	NM_013562	Ifrd1	Interferon-related developmental regulator 1
E04	Mm.105218	NM_008390	Irf1	Interferon regulatory factor 1
E05	Mm.22398	NM_013822	Jag1	Jagged 1
E06	Mm.29324	NM_010699	Ldha	Lactate dehydrogenase A
E07	Mm.12834	NM_008494	Lfng	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
E08	Mm.348025	NM_029796	Lrg1	Leucine-rich alpha-2-glycoprotein 1
E09	Mm.1639	NM_008562	Mcl1	Myeloid cell leukemia sequence 1
E10	Mm.4825	NM_010810	Mmp7	Matrix metallopeptidase 7
E11	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
E12	Mm.290610	NM_008714	Notch1	Notch gene homolog 1 (Drosophila)
F01	Mm.252	NM_008706	Nqo1	NAD(P)H dehydrogenase, quinone 1
F02	Mm.293626	NM_138648	Olr1	Oxidized low density lipoprotein (lectin-like) receptor 1
F03	Mm.7141	NM_011045	Pcna	Proliferating cell nuclear antigen
F04	Mm.328914	NM_011145	Ppard	Peroxisome proliferator activator receptor delta
F05	Mm.228798	NM_008957	Ptch1	Patched homolog 1
F06	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F07	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F08	Mm.330113	NM_011989	Slc27a4	Solute carrier family 27 (fatty acid transporter), member 4
F09	Mm.21002	NM_011400	Slc2a1	Solute carrier family 2 (facilitated glucose transporter), member 1
F10	Mm.3468	NM_007707	Socs3	Suppressor of cytokine signaling 3
F11	Mm.210815	NM_009166	Sorbs1	Sorbin and SH3 domain containing 1
F12	Mm.40828	NM_011018	Sqstm1	Sequestosome 1
G01	Mm.277406	NM_009283	Stat1	Signal transducer and activator of transcription 1
G02	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G03	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G04	Mm.260618	NM_011660	Txn1	Thioredoxin 1
G05	Mm.210155	NM_015762	Txnrd1	Thioredoxin reductase 1
G06	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G07	Mm.10222	NM_018865	Wisp1	WNT1 inducible signaling pathway protein 1
G08	Mm.1123	NM_021279	Wnt1	Wingless-related MMTV integration site 1
G09	Mm.10740	NM_009520	Wnt2b	Wingless related MMTV integration site 2b
G10	Mm.1367	NM_009522	Wnt3a	Wingless-related MMTV integration site 3A
G11	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
G12	Mm.268282	NM_009526	Wnt6	Wingless-related MMTV integration site 6
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, 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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² 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
RT² 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
RT² 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.

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 or can be requested from QIAGEN Technical Services or your local distributor.

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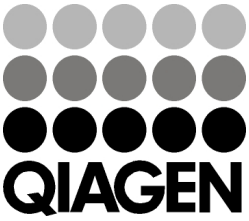

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