

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse cAMP / Calcium Signaling PathwayFinder

Cat. no. 330231 PAMM-066ZA

For pathway expression analysis

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



## Description

The Mouse cAMP/Ca<sup>2+</sup> PathwayFinder RT<sup>2</sup> Profiler PCR Array contains 84 target genes that are responsive to cAMP or calcium ion (Ca<sup>2+</sup>). This array contains genes whose promoters contain SRE or SRE-like enhancer sequences, the CRE enhancer sequence, and other Ca<sup>2+</sup> responsive elements. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes involved in cAMP/Ca<sup>2+</sup> signaling 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 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. RT<sup>2</sup> 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 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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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Adrb1	Ahr	Amd1	Areg	Aif3	Bcl2	Bdnf	Brcal	Calb1	Calb2	Calcr1	Calm1
<b>B</b>	Calr	Ccna1	Ccnd1	Cdk5	Cdkn2b	Cga	Chga	Cnn1	Creb1	Crem	Crh	Cyr61
<b>C</b>	Ddit3	Dusp1	Egr1	Egr2	Eno2	Fgf6	Fos	Fosb	Gcg	Gem	Hk2	Hspa4
<b>D</b>	Hspa5	Il2	Il6	Inhba	Junb	Jund	Kcna5	Krtap14	Ldha	Maf	Mif	Ncam1
<b>E</b>	Nf1	Nos2	Npy	Pck2	Pcna	Penk	Per1	Plat	Pln	Pmaip1	Pou1f1	Pou2f1
<b>F</b>	Ppp1r15a	Ppp2ca	Prkar1a	Prl	Ptgs2	Rb1	S100a8	S100a9	S100g	Scg2	Sgk1	Slc18a1
<b>G</b>	Sod2	Srf	Sat	Satr2	Stat3	Tacr1	Tgfb3	Th	Thbs1	Trif	Vcl	Vip
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.46797	NM_007419	Adrb1	Adrenergic receptor, beta 1
A02	Mm.341377	NM_013464	Ahr	Aryl-hydrocarbon receptor
A03	Mm.253533	NM_009665	Amd1	S-adenosylmethionine decarboxylase 1
A04	Mm.8039	NM_009704	Areg	Amphiregulin
A05	Mm.2706	NM_007498	Aif3	Activating transcription factor 3
A06	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A07	Mm.1442	NM_007540	Bdnf	Brain derived neurotrophic factor
A08	Mm.244975	NM_009764	Brcal	Breast cancer 1
A09	Mm.277665	NM_009788	Calb1	Calbindin 1
A10	Mm.2755	NM_007586	Calb2	Calbindin 2
A11	Mm.75467	NM_018782	Calcr1	Calcitonin receptor-like
A12	Mm.285993	NM_009790	Calm1	Calmodulin 1
B01	Mm.1971	NM_007591	Calr	Calreticulin
B02	Mm.4815	NM_007628	Ccna1	Cyclin A1
B03	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B04	Mm.298798	NM_007668	Cdk5	Cyclin-dependent kinase 5
B05	Mm.423094	NM_007670	Cdkn2b	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B06	Mm.1361	NM_009889	Cga	Glycoprotein hormones, alpha subunit
B07	Mm.4137	NM_007693	Chga	Chromogranin A
B08	Mm.4356	NM_009922	Cnn1	Calponin 1
B09	Mm.453295	NM_133828	Creb1	CAMP responsive element binding protein 1
B10	Mm.5244	NM_013498	Crem	CAMP responsive element modulator
B11	Mm.290689	NM_205769	Crh	Corticotropin releasing hormone
B12	Mm.1231	NM_010516	Cyr61	Cysteine rich protein 61
C01	Mm.110220	NM_007837	Ddit3	DNA-damage inducible transcript 3
C02	Mm.239041	NM_013642	Dusp1	Dual specificity phosphatase 1
C03	Mm.181959	NM_007913	Egr1	Early growth response 1
C04	Mm.290421	NM_010118	Egr2	Early growth response 2
C05	Mm.3913	NM_013509	Eno2	Enolase 2, gamma neuronal
C06	Mm.3403	NM_010204	Fgf6	Fibroblast growth factor 6
C07	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C08	Mm.248335	NM_008036	Fosb	FBJ osteosarcoma oncogene B
C09	Mm.45494	NM_008100	Gcg	Glucagon
C10	Mm.247486	NM_010276	Gem	GTP binding protein (gene overexpressed in skeletal muscle)
C11	Mm.255848	NM_013820	Hk2	Hexokinase 2
C12	Mm.239865	NM_008300	Hspa4	Heat shock protein 4
D01	Mm.330160	NM_022310	Hspa5	Heat shock protein 5
D02	Mm.14190	NM_008366	Il2	Interleukin 2
D03	Mm.1019	NM_031168	Il6	Interleukin 6
D04	Mm.8042	NM_008380	Inhba	Inhibin beta-A
D05	Mm.1167	NM_008416	Junb	Jun-B oncogene
D06	Mm.419851	NM_010592	Jund	Jun proto-oncogene related gene d
D07	Mm.222831	NM_145983	Kcna5	Potassium voltage-gated channel, shaker-related subfamily, member 5
D08	Mm.3502	NM_013707	Krtap14	Keratin associated protein 14
D09	Mm.29324	NM_010699	Ldha	Lactate dehydrogenase A

Position	UniGene	GenBank	Symbol	Description
D10	Mm.275549	NM_001025577	Maf	Avian musculoaponeurotic fibrosarcoma (v-maf) AS42 oncogene homolog
D11	Mm.2326	NM_010798	Mif	Macrophage migration inhibitory factor
D12	Mm.4974	NM_010875	Ncam1	Neural cell adhesion molecule 1
E01	Mm.255596	NM_010897	Nf1	Neurofibromatosis 1
E02	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
E03	Mm.154796	NM_023456	Npy	Neuropeptide Y
E04	Mm.29856	NM_028994	Pck2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E05	Mm.7141	NM_011045	Pcna	Proliferating cell nuclear antigen
E06	Mm.475097	NM_001002927	Penk	Preproenkephalin
E07	Mm.7373	NM_011065	Per1	Period homolog 1 (Drosophila)
E08	Mm.154660	NM_008872	Plat	Plasminogen activator, tissue
E09	Mm.34145	NM_023129	Pln	Phospholamban
E10	Mm.271878	NM_021451	Pmaip1	Phorbol-12-myristate-13-acetate-induced protein 1
E11	Mm.355440	NM_008849	Pou1f1	POU domain, class 1, transcription factor 1
E12	Mm.897	NM_011136	Pou2af1	POU domain, class 2, associating factor 1
F01	Mm.4048	NM_008654	Ppp1r15a	Protein phosphatase 1, regulatory (inhibitor) subunit 15A
F02	Mm.260288	NM_019411	Ppp2ca	Protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform
F03	Mm.30039	NM_021880	Prkar1a	Protein kinase, cAMP dependent regulatory, type I, alpha
F04	Mm.1270	NM_011164	Prl	Prolactin
F05	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F06	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F07	Mm.21567	NM_013650	S100a8	S100 calcium binding protein A8 (calgranulin A)
F08	Mm.2128	NM_009114	S100a9	S100 calcium binding protein A9 (calgranulin B)
F09	Mm.6891	NM_009789	S100g	S100 calcium binding protein G
F10	Mm.5038	NM_009129	Scg2	Secretogranin II
F11	Mm.28405	NM_011361	Sgk1	Serum/glucocorticoid regulated kinase 1
F12	Mm.19301	NM_153054	Slc18a1	Solute carrier family 18 (vesicular monoamine), member 1
G01	Mm.290876	NM_013671	Sod2	Superoxide dismutase 2, mitochondrial
G02	Mm.45044	NM_020493	Srf	Serum response factor
G03	Mm.2453	NM_009215	Sst	Somatostatin
G04	Mm.454968	NM_009217	Sstr2	Somatostatin receptor 2
G05	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G06	Mm.8055	NM_009313	Tacr1	Tachykinin receptor 1
G07	Mm.3992	NM_009368	Tgfb3	Transforming growth factor, beta 3
G08	Mm.1292	NM_009377	Th	Tyrosine hydroxylase
G09	Mm.4159	NM_011580	Thbs1	Thrombospondin 1
G10	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G11	Mm.279361	NM_009502	Vcl	Vinculin
G12	Mm.98916	NM_011702	Vip	Vasoactive intestinal polypeptide
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, 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 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 <sup>2</sup> 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 <sup>2</sup> 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.

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.

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