

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

Rat cAMP / Calcium Signaling PathwayFinder

Cat. no. 330231 PARN-066ZA

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 Rat cAMP/Ca²⁺ PathwayFinder RT² Profiler PCR Array contains 84 target genes that are responsive to cAMP or calcium ion (Ca²⁺). This array contains genes whose promoters contain SRE or SRE-like enhancer sequences, the CRE enhancer sequence, and other Ca²⁺ responsive elements. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes involved in cAMP/Ca²⁺ 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	Adrb1	Ahr	Amd1	Areg	Aif3	Bcl2	Bdnf	Brcal	Calb1	Calb2	Calcr1	Calm1
B	Calr	Ccna1	Ccnd1	Cdk5	Cdkn2b	Cga	Chga	Cnn1	Creb1	Crem	Crh	Cf1
C	Cyr61	Ddit3	Dusp1	Egr1	Egr2	Eno2	Fgf6	Fos	Gcg	Gem	Gipr	Hk2
D	Hspa4	Il2	Il6	Inhba	Junb	Jund	Kcna5	Ldha	Maf	Mif	Ncam1	Nf1
E	Nos2	Npy	Nr4a2	Pck2	Pcna	Penk	Per1	Plat	Pln	Pmaip1	Pou1f1	Pou2f1
F	Ppp1r15a	Ppp2ca	Prkar1a	Prl	Ptgs2	Rb1	S100a6	S100a9	S100g	Scg2	Sgk1	Slc18a1
G	Sod2	Srf	Sat	Satr2	Stat3	Tacr1	Tgfb3	Th	Thbs1	Trif	Vcl	Vip
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.87064	NM_012701	Adrb1	Adrenergic, beta-1-, receptor
A02	Rn.91370	NM_013149	Ahr	Aryl hydrocarbon receptor
A03	Rn.56270	NM_031011	Amd1	Adenosylmethionine decarboxylase 1
A04	Rn.10568	NM_017123	Areg	Amphiregulin
A05	Rn.9664	NM_012912	Aif3	Activating transcription factor 3
A06	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A07	Rn.11266	NM_012513	Bdnf	Brain-derived neurotrophic factor
A08	Rn.48840	NM_012514	Brcal	Breast cancer 1
A09	Rn.3908	NM_031984	Calb1	Calbindin 1
A10	Rn.10321	NM_053988	Calb2	Calbindin 2
A11	Rn.11202	NM_012717	Calcr1	Calcitonin receptor-like
A12	Rn.4166	NM_031969	Calm1	Calmodulin 1
B01	Rn.974	NM_022399	Calr	Calreticulin
B02	Rn.102823	NM_001011949	Ccna1	Cyclin A1
B03	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B04	Rn.10749	NM_080885	Cdk5	Cyclin-dependent kinase 5
B05	Rn.105626	NM_130812	Cdkn2b	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B06	Rn.10589	NM_053918	Cga	Glycoprotein hormones, alpha polypeptide
B07	Rn.41024	NM_021655	Chga	Chromogranin A
B08	Rn.31788	NM_031747	Cnn1	Calponin 1, basic, smooth muscle
B09	Rn.90061	NM_031017	Creb1	CAMP responsive element binding protein 1
B10	Rn.10251	NM_001110860	Crem	CAMP responsive element modulator
B11	Rn.10349	NM_031019	Crh	Corticotropin releasing hormone
B12	Rn.10253	NM_017129	Cf1	Cardiotrophin 1
C01	Rn.22129	NM_031327	Cyr61	Cysteine-rich, angiogenic inducer, 61
C02	Rn.11183	NM_024134	Ddit3	DNA-damage inducible transcript 3
C03	Rn.98260	NM_053769	Dusp1	Dual specificity phosphatase 1
C04	Rn.9096	NM_012551	Egr1	Early growth response 1
C05	Rn.89235	NM_053633	Egr2	Early growth response 2
C06	Rn.10828	NM_139325	Eno2	Enolase 2, gamma, neuronal
C07	Rn.81222	NM_131908	Fgf6	Fibroblast growth factor 6
C08	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C09	Rn.54383	NM_012707	Gcg	Glucagon
C10	Rn.40436	NM_001106637	Gem	GTP binding protein (gene overexpressed in skeletal muscle)
C11	Rn.9676	NM_012714	Gipr	Gastric inhibitory polypeptide receptor
C12	Rn.91375	NM_012735	Hk2	Hexokinase 2
D01	Rn.163092	NM_153629	Hspa4	Heat shock protein 4
D02	Rn.9871	NM_053836	Il2	Interleukin 2
D03	Rn.9873	NM_012589	Il6	Interleukin 6
D04	Rn.9874	NM_017128	Inhba	Inhibin beta-A
D05	Rn.15806	NM_021836	Junb	Jun B proto-oncogene
D06	Rn.46225	NM_138875	Jund	Jun D proto-oncogene
D07	Rn.162789	NM_012972	Kcna5	Potassium voltage-gated channel, shaker-related subfamily, member 5
D08	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
D09	Rn.10726	NM_019318	Maf	V-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)

Position	UniGene	GenBank	Symbol	Description
D10	Rn.2661	NM_031051	Mif	Macrophage migration inhibitory factor
D11	Rn.11283	NM_031521	Ncam1	Neural cell adhesion molecule 1
D12	Rn.10686	NM_012609	Nf1	Neurofibromin 1
E01	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
E02	Rn.9714	NM_012614	Npy	Neuropeptide Y
E03	Rn.88129	NM_019328	Nr4a2	Nuclear receptor subfamily 4, group A, member 2
E04	Rn.35508	NM_001108377	Pck2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E05	Rn.223	NM_022381	Pcna	Proliferating cell nuclear antigen
E06	Rn.10015	NM_017139	Penk	Proenkephalin
E07	Rn.34433	NM_001034125	Per1	Period homolog 1 (Drosophila)
E08	Rn.107102	NM_013151	Plat	Plasminogen activator, tissue
E09	Rn.9740	NM_022707	Pln	Phospholamban
E10	Rn.163380	NM_001008385	Pmaip1	Phorbol-12-myristate-13-acetate-induced protein 1
E11	Rn.10445	NM_013008	Pou1f1	POU class 1 homeobox 1
E12	Rn.15298	NM_001109599	Pou2af1	POU class 2 associating factor 1
F01	Rn.2232	NM_133546	Ppp1r15a	Protein phosphatase 1, regulatory (inhibitor) subunit 15A
F02	Rn.1271	NM_017039	Ppp2ca	Protein phosphatase 2, catalytic subunit, alpha isoform
F03	Rn.10990	NM_013181	Prkar1a	Protein kinase, cAMP-dependent, regulatory, type I, alpha
F04	Rn.9759	NM_012629	Prl	Prolactin
F05	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F06	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
F07	Rn.3233	NM_053485	S100a6	S100 calcium binding protein A6
F08	Rn.6703	NM_053587	S100a9	S100 calcium binding protein A9
F09	Rn.9974	NM_012521	S100g	S100 calcium binding protein G
F10	Rn.45602	NM_022669	Scg2	Secretogranin II (chromogranin C)
F11	Rn.4636	NM_019232	Sgk1	Serum/glucocorticoid regulated kinase 1
F12	Rn.89261	NM_013152	Slc18a1	Solute carrier family 18 (vesicular monoamine), member 1
G01	Rn.10488	NM_017051	Sod2	Superoxide dismutase 2, mitochondrial
G02	Rn.1501	NM_001109302	Srf	Serum response factor (c-fos serum response element-binding transcription factor)
G03	Rn.34418	NM_012659	Sst	Somatostatin
G04	Rn.9929	NM_019348	Sstr2	Somatostatin receptor 2
G05	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G06	Rn.89609	NM_012667	Tacr1	Tachykinin receptor 1
G07	Rn.7018	NM_013174	Tgfb3	Transforming growth factor, beta 3
G08	Rn.11082	NM_012740	Th	Tyrosine hydroxylase
G09	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G10	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G11	Rn.164613	NM_001107248	Vcl	Vinculin
G12	Rn.18675	NM_053991	Vip	Vasoactive intestinal peptide
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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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