

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

Human cAMP / Calcium Signaling PathwayFinder

Cat. no. 330231 PAHS-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 Human 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	ATF3	BCL2	BDNF	BRCA1	CALB1	CALB2	CALM1	CALR
B	CCNA1	CCND1	CDK5	CDKN2B	CGA	CHGA	CNN1	CREB1	CREM	CTF1	CYR61	DDIT3
C	DUSP1	EGR1	EGR2	ENO2	FGF6	FOS	FOSB	GCG	GEM	GIPR	HK2	HSPA4
D	HSPA5	IL2	IL6	INHBA	JUNB	JUND	KCNA5	LDHA	MAF	MIF	NCAM1	NF1
E	NOS2	NPY	NR4A2	PCK2	PCNA	PENK	PER1	PLAT	PLN	PMAIP1	POU1F1	POU2AF1
F	PPP1R15A	PPP2CA	PRKAR1A	PRL	PTGS2	RB1	S100A12	S100A6	S100G	SCG2	SGK1	SLC18A1
G	SOD2	SRF	SST	SSTR2	STAT3	TACR1	TGFB3	TH	THBS1	TNF	VCL	VIP
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.99913	NM_000684	ADRB1	Adrenergic, beta-1-, receptor
A02	Hs.171189	NM_001621	AHR	Aryl hydrocarbon receptor
A03	Hs.159118	NM_001634	AMD1	Adenosylmethionine decarboxylase 1
A04	Hs.270833	NM_001657	AREG	Amphiregulin
A05	Hs.460	NM_001674	ATF3	Activating transcription factor 3
A06	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A07	Hs.502182	NM_001709	BDNF	Brain-derived neurotrophic factor
A08	Hs.194143	NM_007294	BRCA1	Breast cancer 1, early onset
A09	Hs.65425	NM_004929	CALB1	Calbindin 1, 28kDa
A10	Hs.106857	NM_001740	CALB2	Calbindin 2
A11	Hs.282410	NM_006888	CALM1	Calmodulin 1 (phosphorylase kinase, delta)
A12	Hs.515162	NM_004343	CALR	Calreticulin
B01	Hs.417050	NM_003914	CCNA1	Cyclin A1
B02	Hs.523852	NM_053056	CCND1	Cyclin D1
B03	Hs.647078	NM_004935	CDK5	Cyclin-dependent kinase 5
B04	Hs.72901	NM_004936	CDKN2B	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B05	Hs.119689	NM_000735	CGA	Glycoprotein hormones, alpha polypeptide
B06	Hs.150793	NM_001275	CHGA	Chromogranin A (parathyroid secretory protein 1)
B07	Hs.465929	NM_001299	CNN1	Calponin 1, basic, smooth muscle
B08	Hs.516646	NM_004379	CREB1	CAMP responsive element binding protein 1
B09	Hs.200250	NM_183011	CREM	CAMP responsive element modulator
B10	Hs.483811	NM_001330	CTF1	Cardiotrophin 1
B11	Hs.8867	NM_001554	CYR61	Cysteine-rich, angiogenic inducer, 61
B12	Hs.728989	NM_004083	DDIT3	DNA-damage-inducible transcript 3
C01	Hs.171695	NM_004417	DUSP1	Dual specificity phosphatase 1
C02	Hs.326035	NM_001964	EGR1	Early growth response 1
C03	Hs.1395	NM_000399	EGR2	Early growth response 2
C04	Hs.511915	NM_001975	ENO2	Enolase 2 (gamma, neuronal)
C05	Hs.166015	NM_020996	FGF6	Fibroblast growth factor 6
C06	Hs.728789	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
C07	Hs.590958	NM_006732	FOSB	FBJ murine osteosarcoma viral oncogene homolog B
C08	Hs.516494	NM_002054	GCG	Glucagon
C09	Hs.654463	NM_005261	GEM	GTP binding protein overexpressed in skeletal muscle
C10	Hs.658534	NM_000164	GIPR	Gastric inhibitory polypeptide receptor
C11	Hs.406266	NM_000189	HK2	Hexokinase 2
C12	Hs.90093	NM_002154	HSPA4	Heat shock 70kDa protein 4
D01	Hs.716396	NM_005347	HSPA5	Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)
D02	Hs.89679	NM_000586	IL2	Interleukin 2
D03	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D04	Hs.583348	NM_002192	INHBA	Inhibin, beta A
D05	Hs.25292	NM_002229	JUNB	Jun B proto-oncogene
D06	Hs.2780	NM_005354	JUND	Jun D proto-oncogene
D07	Hs.150208	NM_002234	KCNA5	Potassium voltage-gated channel, shaker-related subfamily, member 5
D08	Hs.2795	NM_005566	LDHA	Lactate dehydrogenase A
D09	Hs.134859	NM_005360	MAF	V-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)

Position	UniGene	GenBank	Symbol	Description
D10	Hs.407995	NM_002415	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
D11	Hs.503878	NM_000615	NCAM1	Neural cell adhesion molecule 1
D12	Hs.113577	NM_000267	NF1	Neurofibromin 1
E01	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
E02	Hs.1832	NM_000905	NPY	Neuropeptide Y
E03	Hs.563344	NM_006186	NR4A2	Nuclear receptor subfamily 4, group A, member 2
E04	Hs.75812	NM_004563	PCK2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E05	Hs.728886	NM_182649	PCNA	Proliferating cell nuclear antigen
E06	Hs.339831	NM_006211	PENK	Proenkephalin
E07	Hs.445534	NM_002616	PER1	Period homolog 1 (Drosophila)
E08	Hs.491582	NM_000930	PLAT	Plasminogen activator, tissue
E09	Hs.170839	NM_002667	PLN	Phospholamban
E10	Hs.96	NM_021127	PMAIP1	Phorbol-12-myristate-13-acetate-induced protein 1
E11	Hs.591654	NM_000306	POU1F1	POU class 1 homeobox 1
E12	Hs.654525	NM_006235	POU2AF1	POU class 2 associating factor 1
F01	Hs.631593	NM_014330	PPP1R15A	Protein phosphatase 1, regulatory (inhibitor) subunit 15A
F02	Hs.483408	NM_002715	PPP2CA	Protein phosphatase 2, catalytic subunit, alpha isozyme
F03	Hs.280342	NM_002734	PRKAR1A	Protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1)
F04	Hs.1905	NM_000948	PRL	Prolactin
F05	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F06	Hs.408528	NM_000321	RB1	Retinoblastoma 1
F07	Hs.19413	NM_005621	S100A12	S100 calcium binding protein A12
F08	Hs.275243	NM_014624	S100A6	S100 calcium binding protein A6
F09	Hs.639	NM_004057	S100G	S100 calcium binding protein G
F10	Hs.516726	NM_003469	SCG2	Secretogranin II
F11	Hs.510078	NM_005627	SGK1	Serum/glucocorticoid regulated kinase 1
F12	Hs.158322	NM_003053	SLC18A1	Solute carrier family 18 (vesicular monoamine), member 1
G01	Hs.487046	NM_000636	SOD2	Superoxide dismutase 2, mitochondrial
G02	Hs.520140	NM_003131	SRF	Serum response factor (c-fos serum response element-binding transcription factor)
G03	Hs.12409	NM_001048	SST	Somatostatin
G04	Hs.514451	NM_001050	SSTR2	Somatostatin receptor 2
G05	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G06	Hs.633301	NM_001058	TACR1	Tachykinin receptor 1
G07	Hs.592317	NM_003239	TGFB3	Transforming growth factor, beta 3
G08	Hs.435609	NM_000360	TH	Tyrosine hydroxylase
G09	Hs.164226	NM_003246	THBS1	Thrombospondin 1
G10	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G11	Hs.643896	NM_003373	VCL	Vinculin
G12	Hs.53973	NM_003381	VIP	Vasoactive intestinal peptide
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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