

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

Mouse Glucocorticoid Signaling

Cat. no. 330231 PAMM-154ZA

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 Mouse Glucocorticoid Signaling RT² Profiler PCR Array profiles the expression of 84 key genes involved in signaling initiated by the glucocorticoid receptor. Secreted by the adrenal cortex, glucocorticoid hormones affect several biological processes, from inhibiting inflammation to maintaining normal blood glucose levels and more. Signaling occurs when the glucocorticoid receptor binds the cell-permeable hormones, causing nuclear translocation, interaction with other co-transcription factors (indicating a role of crosstalk with other pathways), and the activation or repression of target gene expression. The therapeutic use of glucocorticoids (such as the commonly used prednisone, dexamethasone, or hydrocortisone) helps treat various disorders including allergies, asthma, autoimmune diseases, dermatitis, leukemia, lymphomas, and rheumatoid arthritis. Their immunosuppressant activity also helps prevent acute transplant rejection and graft-versus-host disease. Resistance and side-effects (such as the susceptibility to infection and inhibition of tissue repair processes) limit the long-term use of these drugs, but has spurred research into the development of safer glucocorticoid analogs. Examining glucocorticoid transcriptional responses could help provide a better understanding of their effects on biological processes in any target tissue. This array includes the glucocorticoid receptors and key co-transcription factors, but mostly target genes identified from studies simultaneously using both chromatin immunoprecipitation (ChIP) and gene expression in the two key responsive tissues: adipose and lung. A set of controls present on each array enables data analysis using the $\Delta\Delta\text{CT}$ method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in glucocorticoid 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	Adarb1	Aff1	Ak2	Ampd3	Angptl4	Anxa4	Aqp1	Arid5b	Asph	Atf4	Bcl6	Bmper
B	Calcr	Cebpa	Cebpb	Col4a2	Creb1	Creb3	Creb3l4	Ctgf	Cyb56l1	Ddit4	Diras2	Dusp1
C	Edn1	Ehd3	Errf1	Fkbp5	Fosl2	Gdpd1	Ghrhr	Glul	Got1	H6pd	Has2	Hnrpl
D	Il10	Il1rn	Il6	Il6ra	Klf13	Klf9	Lox	Mertk	Mt1	Mt2	Nfkbia	Nr3c1
E	Pdcd7	Pdgfrb	Pdp1	Per1	Per2	Pik3r1	Pld1	Plekhf1	Pou2f1	Pou2f2	Rasa3	Rgs2
F	Rhob	Rhoj	Sesn1	Sgk1	Slc10a6	Slc19a2	Slc22a5	Snta1	Sphk1	Spsb1	Stat5a	Stat5b
G	Tbl1xr1	Tnf	Tnfrsf3	Tsc22d3	Usp2	Usp54	Vdr	Vldlr	Xdh	Zfp281	Zfp36	Zhx3
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.276815	NM_130895	Adarb1	Adenosine deaminase, RNA-specific, B1
A02	Mm.6949	NM_133919	Aff1	AF4/FMR2 family, member 1
A03	Mm.29460	NM_016895	Ak2	Adenylate kinase 2
A04	Mm.3238	NM_009667	Ampd3	Adenosine monophosphate deaminase 3
A05	Mm.196189	NM_020581	Angptl4	Angiopoietin-like 4
A06	Mm.259702	NM_013471	Anxa4	Annexin A4
A07	Mm.18625	NM_007472	Aqp1	Aquaporin 1
A08	Mm.440357	NM_023598	Arid5b	AT rich interactive domain 5B (MRF1-like)
A09	Mm.222206	NM_023066	Asph	Aspartate-beta-hydroxylase
A10	Mm.641	NM_009716	Atf4	Activating transcription factor 4
A11	Mm.347398	NM_009744	Bcl6	B-cell leukemia/lymphoma 6
A12	Mm.335020	NM_028472	Bmper	BMP-binding endothelial regulator
B01	Mm.4642	NM_007588	Calcr	Calcitonin receptor
B02	Mm.349667	NM_007678	Cebpa	CCAAT/enhancer binding protein (C/EBP), alpha
B03	Mm.439656	NM_009883	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
B04	Mm.181021	NM_009932	Col4a2	Collagen, type IV, alpha 2
B05	Mm.453295	NM_133828	Creb1	CAMP responsive element binding protein 1
B06	Mm.12407	NM_013497	Creb3	CAMP responsive element binding protein 3
B07	Mm.299952	NM_030080	Creb3l4	CAMP responsive element binding protein 3-like 4
B08	Mm.390287	NM_010217	Ctgf	Connective tissue growth factor
B09	Mm.149403	NM_007805	Cyb56l1	Cytochrome b-561
B10	Mm.21697	NM_029083	Ddit4	DNA-damage-inducible transcript 4
B11	Mm.29362	NM_001024474	Diras2	DIRAS family, GTP-binding RAS-like 2
B12	Mm.239041	NM_013642	Dusp1	Dual specificity phosphatase 1
C01	Mm.14543	NM_010104	Edn1	Endothelin 1
C02	Mm.18526	NM_020578	Ehd3	EH-domain containing 3
C03	Mm.318841	NM_133753	Errf1	ERBB receptor feedback inhibitor 1
C04	Mm.276405	NM_010220	Fkbp5	FK506 binding protein 5
C05	Mm.24684	NM_008037	Fosl2	Fos-like antigen 2
C06	Mm.281887	NM_025638	Gdpd1	Glycerophosphodiester phosphodiesterase domain containing 1
C07	Mm.89928	NM_001003685	Ghrhr	Growth hormone releasing hormone receptor
C08	Mm.210745	NM_008131	Glul	Glutamate-ammonia ligase (glutamine synthetase)
C09	Mm.19039	NM_010324	Got1	Glutamate oxaloacetate transaminase 1, soluble
C10	Mm.22183	NM_173371	H6pd	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
C11	Mm.5148	NM_008216	Has2	Hyaluronan synthase 2
C12	Mm.64579	NM_144802	Hnrpl	Heterogeneous nuclear ribonucleoprotein L-like
D01	Mm.874	NM_010548	Il10	Interleukin 10
D02	Mm.882	NM_031167	Il1rn	Interleukin 1 receptor antagonist
D03	Mm.1019	NM_031168	Il6	Interleukin 6
D04	Mm.2856	NM_010559	Il6ra	Interleukin 6 receptor, alpha
D05	Mm.240473	NM_021366	Klf13	Kruppel-like factor 13
D06	Mm.291595	NM_010638	Klf9	Kruppel-like factor 9
D07	Mm.172	NM_010728	Lox	Lysyl oxidase
D08	Mm.239655	NM_008587	Mertk	C-mer proto-oncogene tyrosine kinase
D09	Mm.192991	NM_013602	Mt1	Metallothionein 1

Position	UniGene	GenBank	Symbol	Description
D10	Mm.147226	NM_008630	Mt2	Metallothionein 2
D11	Mm.170515	NM_010907	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
D12	Mm.129481	NM_008173	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
E01	Mm.29193	NM_016688	Pdcd7	Programmed cell death 7
E02	Mm.4146	NM_008809	Pdgfrb	Platelet derived growth factor receptor, beta polypeptide
E03	Mm.331489	NM_001033453	Pdp1	Pyruvate dehydrogenase phosphatase catalytic subunit 1
E04	Mm.7373	NM_011065	Per1	Period homolog 1 (Drosophila)
E05	Mm.482463	NM_011066	Per2	Period homolog 2 (Drosophila)
E06	Mm.259333	NM_001024955	Pik3r1	Phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)
E07	Mm.212039	NM_008875	Pld1	Phospholipase D1
E08	Mm.333798	NM_024413	Plekhf1	Pleckstrin homology domain containing, family F (with FYVE domain) member 1
E09	Mm.245261	NM_198934	Pou2f1	POU domain, class 2, transcription factor 1
E10	Mm.76683	NM_011138	Pou2f2	POU domain, class 2, transcription factor 2
E11	Mm.18517	NM_009025	Rasa3	RAS p21 protein activator 3
E12	Mm.28262	NM_009061	Rgs2	Regulator of G-protein signaling 2
F01	Mm.687	NM_007483	Rhob	Ras homolog gene family, member B
F02	Mm.27467	NM_023275	Rhoj	Ras homolog gene family, member J
F03	Mm.139418	NM_001013370	Sesn1	Sestrin 1
F04	Mm.28405	NM_011361	Sgk1	Serum/glucocorticoid regulated kinase 1
F05	Mm.7446	NM_029415	Slc10a6	Solute carrier family 10 (sodium/bile acid cotransporter family), member 6
F06	Mm.35444	NM_054087	Slc19a2	Solute carrier family 19 (thiamine transporter), member 2
F07	Mm.42253	NM_011396	Slc22a5	Solute carrier family 22 (organic cation transporter), member 5
F08	Mm.1541	NM_009228	Snta1	Syntrophin, acidic 1
F09	Mm.20944	NM_025367	Sphk1	Sphingosine kinase 1
F10	Mm.30	NM_029035	Spsb1	SplA/ryanodine receptor domain and SOCS box containing 1
F11	Mm.277403	NM_011488	Stat5a	Signal transducer and activator of transcription 5A
F12	Mm.34064	NM_011489	Stat5b	Signal transducer and activator of transcription 5B
G01	Mm.202966	NM_030732	Tbl1xr1	Transducin (beta)-like 1X-linked receptor 1
G02	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G03	Mm.116683	NM_009397	Tnfaip3	Tumor necrosis factor, alpha-induced protein 3
G04	Mm.485388	NM_010286	Tsc22d3	TSC22 domain family, member 3
G05	Mm.272770	NM_198092	Usp2	Ubiquitin specific peptidase 2
G06	Mm.301173	NM_030180	Usp54	Ubiquitin specific peptidase 54
G07	Mm.245084	NM_009504	Vdr	Vitamin D receptor
G08	Mm.4141	NM_013703	Vldlr	Very low density lipoprotein receptor
G09	Mm.11223	NM_011723	Xdh	Xanthine dehydrogenase
G10	Mm.62521	NM_177643	Zfp281	Zinc finger protein 281
G11	Mm.389856	NM_011756	Zfp36	Zinc finger protein 36
G12	Mm.436734	NM_177263	Zhx3	Zinc fingers and homeoboxes 3
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.
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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