

RT² Profiler PCR Array (Rotor-Gene[®] Format)

Mouse Polycomb & Trithorax Complexes

Cat. no. 330231 PAMM-506ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Mouse Polycomb & Trithorax Complexes RT² Profiler PCR Array profiles the expression of 84 key polycomb and trithorax complex components including chromatin modification enzymes and remodeling factors. The polycomb and trithorax complexes maintain epigenetic control of cell type specific gene expression patterns important for cellular identity via histone modification. The polycomb complex causes transcriptional repression, while the trithorax complex reverses that effect to maintain an active state of transcription. Polycomb and trithorax complex activity controls the proper differentiation of induced and embryonic pluripotent stem cells. Dysregulation of their activities promotes oncogenesis by causing inappropriate expression of cell identity, differentiation and proliferation genes. Research into the expression and regulation of these complexes can help determine the underlying mechanisms of histone modification based regulation of gene expression during differentiation and oncogenesis. This array includes core components of the polycomb and trithorax complexes as well as key interactors and genes necessary for complex assembly. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes involved in polycomb and trithorax complex activity with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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.



Sample & Assay Technologies

Array layout

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.479349	NM_009637	Aebp2	AE binding protein 2
A02	Mm.22478	NM_001080819	Arid1a	AT rich interactive domain 1A (SWI-like)
A03	Mm.133401	NM_001085355	Arid1b	AT rich interactive domain 1B (SWI-like)
A04	Mm.130752	NM_138679	Ash1l	Ash1 (absent, small, or homeotic)-like (Drosophila)
A05	Mm.27706	NM_011791	Ash2l	Ash2 (absent, small, or homeotic)-like (Drosophila)
A06	Mm.330677	NM_001039939	Asxl1	Additional sex combs like 1 (Drosophila)
A07	Mm.120475	NM_172421	Asxl2	Additional sex combs like 2 (Drosophila)
A08	Mm.392310	NM_001167777	Asxl3	Additional sex combs like 3 (Drosophila)
A09	Mm.3779	NM_027088	Bap1	Brca1 associated protein 1
A10	Mm.289584	NM_007552	Bmi1	Bmi1 polycomb ring finger oncogene
A11	Mm.343986	NM_176850	Bptf	Bromodomain PHD finger transcription factor
A12	Mm.29055	NM_007622	Cbx1	Chromobox homolog 1 (Drosophila HP1 beta)
B01	Mm.14547	NM_007623	Cbx2	Chromobox homolog 2 (Drosophila Pc class)
B02	Mm.280968	NM_007624	Cbx3	Chromobox homolog 3 (Drosophila HP1 gamma)
B03	Mm.268070	NM_007625	Cbx4	Chromobox homolog 4 (Drosophila Pc class)
B04	Mm.262059	NM_007626	Cbx5	Chromobox homolog 5 (Drosophila HP1 alpha)
B05	Mm.323442	NM_144811	Cbx7	Chromobox homolog 7
B06	Mm.99953	NM_013926	Cbx8	Chromobox homolog 8 (Drosophila Pc class)
B07	Mm.7286	NM_013502	Ctbp1	C-terminal binding protein 1
B08	Mm.246240	NM_009980	Ctbp2	C-terminal binding protein 2
B09	Mm.17537	NM_028868	Cxxc1	CXXC finger 1 (PHD domain)
B10	Mm.128580	NM_010066	Dnmt1	DNA methyltransferase (cytosine-5) 1
B11	Mm.5001	NM_007872	Dnmt3a	DNA methyltransferase 3A
B12	Mm.89772	NM_010068	Dnmt3b	DNA methyltransferase 3B
C01	Mm.13433	NM_019448	Dnmt3l	DNA (cytosine-5)-methyltransferase 3-like
C02	Mm.23296	NM_033270	E2f6	E2F transcription factor 6
C03	Mm.380914	NM_021876	Eed	Embryonic ectoderm development
C04	Mm.312133	NM_027497	Epc1	Enhancer of polycomb homolog 1 (Drosophila)
C05	Mm.5027	NM_007970	Ezh1	Enhancer of zeste homolog 1 (Drosophila)
C06	Mm.246688	NM_007971	Ezh2	Enhancer of zeste homolog 2 (Drosophila)
C07	Mm.209650	NM_144959	Hlf	Helicase-like transcription factor
C08	Mm.209071	NM_010414	Htt	Huntingtin
C09	Mm.330496	NM_026574	Ino80	INO80 homolog (S. cerevisiae)
C10	Mm.27814	NM_023547	Ino80b	INO80 complex subunit B
C11	Mm.258973	NM_172625	Ino80c	INO80 complex subunit C
C12	Mm.74718	NM_001114609	Ino80d	INO80 complex subunit D
D01	Mm.25059	NM_021878	Jarid2	Jumonji, AT rich interactive domain 2
D02	Mm.86406	NM_013910	Kdm2b	Lysine (K)-specific demethylase 2B
D03	Mm.262676	NM_011419	Kdm5d	Lysine (K)-specific demethylase 5D
D04	Mm.280768	NM_145993	L3mbtl2	L(3)mbt-like 2 (Drosophila)
D05	Mm.291032	NM_138593	Larp7	La ribonucleoprotein domain family, member 7
D06	Mm.210334	NM_134012	Mbt1	Mbt domain containing 1
D07	Mm.2389	NM_001081049	Mll1	Myeloid/lymphoid or mixed-lineage leukemia 1
D08	Mm.264889	NM_001033276	Mll2	Myeloid/lymphoid or mixed-lineage leukemia 2
D09	Mm.332268	NM_001081383	Mll3	Myeloid/lymphoid or mixed-lineage leukemia 3
D10	Mm.1597	NM_008619	Mov10	Moloney leukemia virus 10
D11	Mm.257149	NM_013827	Mtf2	Metal response element binding transcription factor 2
D12	Mm.27913	NM_001081251	Pbrm1	Polybromo 1
E01	Mm.12261	NM_197992	Pcgf1	Polycomb group ring finger 1
E02	Mm.2418	NM_009545	Pcgf2	Polycomb group ring finger 2
E03	Mm.259180	NM_029508	Pcgf5	Polycomb group ring finger 5
E04	Mm.6822	NM_007905	Phc1	Polyhomeotic-like 1 (Drosophila)
E05	Mm.259103	NM_018774	Phc2	Polyhomeotic-like 2 (Drosophila)
E06	Mm.233173	NM_153421	Phc3	Polyhomeotic-like 3 (Drosophila)
E07	Mm.480590	NM_009343	Phf1	PHD finger protein 1
E08	Mm.65691	NM_028716	Phf19	PHD finger protein 19
E09	Mm.280784	NM_013636	Ppp1cc	Protein phosphatase 1, catalytic subunit, gamma isoform

Position	UniGene	GenBank	Symbol	Description
E10	Mm.105230	NM_146154	Ppp1r8	Protein phosphatase 1, regulatory (inhibitor) subunit 8
E11	Mm.12145	NM_009030	Rbbp4	Retinoblastoma binding protein 4
E12	Mm.132868	NM_172517	Rbbp5	Retinoblastoma binding protein 5
F01	Mm.270186	NM_009031	Rbbp7	Retinoblastoma binding protein 7
F02	Mm.12825	NM_009034	Rbp2	Retinol binding protein 2, cellular
F03	Mm.20343	NM_009066	Ring1	Ring finger protein 1
F04	Mm.259254	NM_011882	Rnasel	Ribonuclease L (2', 5'-oligoadenylate synthetase-dependent)
F05	Mm.482250	NM_011277	Rnf2	Ring finger protein 2
F06	Mm.427014	NM_013883	Scmh1	Sex comb on midleg homolog 1
F07	Mm.159173	NM_133194	Scml2	Sex comb on midleg-like 2 (Drosophila)
F08	Mm.351459	NM_019812	Sirt1	Sirtuin 1 (silent mating type information regulation 2, homolog) 1 (S. cerevisiae)
F09	Mm.229151	NM_053123	Smarca1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 1
F10	Mm.313303	NM_011416	Smarca2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2
F11	Mm.286593	NM_011417	Smarca4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4
F12	Mm.246803	NM_053124	Smarca5	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5
G01	Mm.279751	NM_011418	Smarcb1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1
G02	Mm.85410	NM_009211	Smarcc1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 1
G03	Mm.417338	NM_198160	Smarcc2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
G04	Mm.2093	NM_011427	Snai1	Snail homolog 1 (Drosophila)
G05	Mm.283410	NM_199196	Suz12	Suppressor of zeste 12 homolog (Drosophila)
G06	Mm.314056	NM_009054	Trim27	Tripartite motif-containing 27
G07	Mm.34489	NM_145628	Usp11	Ubiquitin specific peptidase 11
G08	Mm.295330	NM_001003918	Usp7	Ubiquitin specific peptidase 7
G09	Mm.168688	NM_029274	Wbp7	WW domain binding protein 7
G10	Mm.28265	NM_080848	Wdr5	WD repeat domain 5
G11	Mm.4714	NM_024189	Yaf2	YY1 associated factor 2
G12	Mm.457803	NM_001033324	Zbtb16	Zinc finger and BTB domain containing 16
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 ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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