

RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Polycomb & Trithorax Target Genes

Cat. no. 330231 PAMM-505ZR

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 Target Genes RT² Profiler PCR Array profiles the expression of 84 key genes targeted by the Polycomb and Trithorax complexes of 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, as confirmed via expression changes of identified target genes reflected in the content of this array. Dysregulation of polycomb and trithorax complex activity promotes oncogenesis by causing inappropriate expression of cell identity and differentiation genes, making the study of target gene expression important to cancer research. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes targeted by polycomb and trithorax complexes with this array.

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

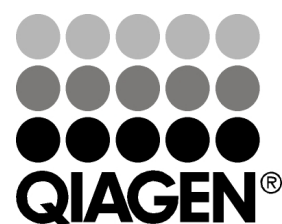
Shipping and storage

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.2706	NM_007498	Ahf3	Activating transcription factor 3
A02	Mm.289584	NM_007552	Bmi1	Bmi1 polycomb ring finger oncogene
A03	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
A04	Mm.234832	NM_018770	Cadm1	Cell adhesion molecule 1
A05	Mm.99953	NM_013926	Cbx8	Chromobox homolog 8 (Drosophila Pc class)
A06	Mm.333406	NM_009829	Ccnd2	Cyclin D2
A07	Mm.307488	NM_027219	Cdc42ep1	CDC42 effector protein (Rho GTPase binding) 1
A08	Mm.1571	NM_009866	Cdh11	Cadherin 11
A09	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
A10	Mm.360747	NM_021439	Chst11	Carbohydrate sulfotransferase 11
A11	Mm.359633	NM_008906	Ctsa	Cathepsin A
A12	Mm.425692	NM_023158	Cxcl16	Chemokine (C-X-C motif) ligand 16
B01	Mm.6522	NM_007722	Cxcr7	Chemokine (C-X-C motif) receptor 7
B02	Mm.214016	NM_009994	Cyp11b1	Cytochrome P450, family 1, subfamily b, polypeptide 1
B03	Mm.180189	NM_026384	Dgat2	Diacylglycerol O-acyltransferase 2
B04	Mm.324688	NM_007857	Dhh	Desert hedgehog
B05	Mm.214717	NM_010051	Dkk1	Dickkopf homolog 1 (Xenopus laevis)
B06	Mm.103593	NM_020265	Dkk2	Dickkopf homolog 2 (Xenopus laevis)
B07	Mm.3374	NM_010110	Efnb1	Ephrin B1
B08	Mm.400747	NM_007936	Epha4	Eph receptor A4
B09	Mm.6972	NM_010143	Ephb3	Eph receptor B3
B10	Mm.8017	NM_007957	Esx1	Extraembryonic, spermatogenesis, homeobox 1
B11	Mm.41261	NM_001081241	Fam65a	Family with sequence similarity 65, member A
B12	Mm.938	NM_010446	Foxa2	Forkhead box A2
C01	Mm.439721	NM_008059	G0s2	G0/G1 switch gene 2
C02	Mm.3982	NM_019521	Gas6	Growth arrest specific 6
C03	Mm.272747	NM_008090	Gata2	GATA binding protein 2
C04	Mm.313866	NM_008091	Gata3	GATA binding protein 3
C05	Mm.247669	NM_008092	Gata4	GATA binding protein 4
C06	Mm.329287	NM_010258	Gata6	GATA binding protein 6
C07	Mm.12239	NM_020567	Gmnn	Geminin
C08	Mm.4746	NM_008213	Hand1	Heart and neural crest derivatives expressed transcript 1
C09	Mm.390859	NM_008235	Hes1	Hairy and enhancer of split 1 (Drosophila)
C10	Mm.29581	NM_010423	Hey1	Hairy/enhancer-of-split related with YRPW motif 1
C11	Mm.5	NM_008263	Hoxa10	Homeobox A10
C12	Mm.173	NM_010453	Hoxa5	Homeobox A5
D01	Mm.12559	NM_010474	Hs3st1	Heparan sulfate (glucosamine) 3-O-sulfotransferase 1
D02	Mm.252561	NM_015819	Hs6st2	Heparan sulfate 6-O-sulfotransferase 2
D03	Mm.21300	NM_008341	Igfbp1	Insulin-like growth factor binding protein 1
D04	Mm.2856	NM_010559	Il6ra	Interleukin 6 receptor, alpha
D05	Mm.261591	NM_010572	Irs4	Insulin receptor substrate 4
D06	Mm.238044	NM_008393	Irx3	Iroquois related homeobox 3 (Drosophila)
D07	Mm.275071	NM_010591	Jun	Jun oncogene
D08	Mm.40424	NM_010595	Kcna1	Potassium voltage-gated channel, shaker-related subfamily, member 1
D09	Mm.4325	NM_010637	Klf4	Kruppel-like factor 4 (gut)
D10	Mm.172	NM_010728	Lox	Lysyl oxidase
D11	Mm.247566	NM_010825	Meis2	Meis homeobox 2
D12	Mm.272197	NM_011844	Mgll	Monoglyceride lipase
E01	Mm.260098	NM_201600	Myo5b	Myosin Vb
E02	Mm.20348	NM_008695	Nid2	Nidogen 2
E03	Mm.5142	NM_008730	Nptx1	Neuronal pentraxin 1
E04	Mm.134516	NM_144841	Otx2	Orthodenticle homolog 2 (Drosophila)
E05	Mm.39738	NM_001105245	Pcdh19	Protocadherin 19
E06	Mm.221403	NM_011058	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
E07	Mm.1237	NM_008885	Pmp22	Peripheral myelin protein 22
E08	Mm.341677	NM_008856	Prkch	Protein kinase C, eta
E09	Mm.263002	NM_008926	Prkg2	Protein kinase, cGMP-dependent, type II

Position	UniGene	GenBank	Symbol	Description
E10	Mm.224246	NM_008980	Ptpra	Protein tyrosine phosphatase, receptor type, A
E11	Mm.259318	NM_011243	Rarb	Retinoic acid receptor, beta
E12	Mm.3903	NM_009026	Rasd1	RAS, dexamethasone-induced 1
F01	Mm.12091	NM_019713	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
F02	Mm.270186	NM_009031	Rbbp7	Retinoblastoma binding protein 7
F03	Mm.214361	NM_021390	Sall1	Sal-like 1 (Drosophila)
F04	Mm.311655	NM_009122	Satb1	Special AT-rich sequence binding protein 1
F05	Mm.271870	NM_011111	Serpinb2	Serine (or cysteine) peptidase inhibitor, clade B, member 2
F06	Mm.27801	NM_011774	Slc30a4	Solute carrier family 30 (zinc transporter), member 4
F07	Mm.284891	NM_011402	Slc34a2	Solute carrier family 34 (sodium phosphate), member 2
F08	Mm.30162	NM_022315	Smoc2	SPARC related modular calcium binding 2
F09	Mm.279103	NM_011441	Sox17	SRY-box containing gene 17
F10	Mm.439913	NM_020047	Tacstd2	Tumor-associated calcium signal transducer 2
F11	Mm.31630	NM_009331	Tcf7	Transcription factor 7, T-cell specific
F12	Mm.24096	NM_009378	Thbd	Thrombomodulin
G01	Mm.3943	NM_009379	Thpo	Thrombopoietin
G02	Mm.4871	NM_011595	Timp3	Tissue inhibitor of metalloproteinase 3
G03	Mm.290353	NM_026432	Tmem66	Transmembrane protein 66
G04	Mm.281356	NM_013869	Tnfrsf19	Tumor necrosis factor receptor superfamily, member 19
G05	Mm.299155	NM_011280	Trim10	Tripartite motif-containing 10
G06	Mm.307027	NM_001024134	Trim15	Tripartite motif-containing 15
G07	Mm.131943	NM_177341	Trpm3	Transient receptor potential cation channel, subfamily M, member 3
G08	Mm.102136	NM_001081300	Tshz1	Teashirt zinc finger family member 1
G09	Mm.4177	NM_009463	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
G10	Mm.38976	NM_144937	Usp3	Ubiquitin specific peptidase 3
G11	Mm.27005	NM_012038	Vsnl1	Visinin-like 1
G12	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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