RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Cell Lineage Identification

Cat. no. 330231 PAMM-508ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Mouse Cell Lineage Identification RT² Profiler PCR Array profiles the expression of 84 key genes for cellular differentiation. During embryonic development, pluripotent stem cells differentiate into three germ layers: ectoderm, mesoderm and endoderm. These germ layers eventually differentiate into multipotent stem cells (progenitors), which progress into terminally differentiated cells. These developmental processes require tightly regulated and carefully timed gene expression changes. Analysis of these genes can suggest the identity of an intermediately or terminally differentiated cell, and/or the mechanism of a studied differentiation process. This array contains gene markers for specific cell types throughout cellular lineage progression, including pluripotent stem cells, progenitor cells from each of the three germ layers, and terminally differentiated cells. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of cellular lineage progression markers 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.

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.16773	NM_009654	Alb	Albumin
A02	Mm.2266	NM_013475	Apoh	Apolipoprotein H
A03	Mm.18625	NM_007472	Aqp1	Aquaporin 1
A04	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
A05	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
A06	Mm.29798	NM_133654	Cd34	CD34 antigen
A07	Mm.210361	NM_007648	Cd3e	CD3 antigen, epsilon polypeptide
A08	Mm.1355	NM_007655	Cd79a	CD79A antigen (immunoglobulin-associated alpha)
A09	Mm.442817	NM_009891	Chat	Choline acetyltransferase
A10	Mm.443177	NM_009925	Col10a1	Collagen, type X, alpha 1
A11	Mm.45071	NM_016685	Comp	Cartilage oligomeric matrix protein
A12	Mm.25377	NM_025350	Cpa1	Carboxypeptidase A1
B01	Mm.272085	NM_007802	Ctsk	Cathepsin K
B02	Mm.56769	NM_007833	Dcn	Decorin
B03	Mm.12871	NM_010025	Dcx	Doublecortin
B04	Mm.89772	NM_010068	Dnmt3b	DNA methyltransferase 3B
B05	Mm.1151	NM_010074	Dpp4	Dipeptidylpeptidase 4
B06	Mm.70666	NM_023119	Eno1	Enolase 1, alpha non-neuron
B07	Mm.3644	NM_021272	Fabp7	Fatty acid binding protein 7, brain
B08	Mm.5055	NM_010203	Fgf5	Fibroblast growth factor 5
B09	Mm.4578	NM_008259	Foxa1	Forkhead box A1
B10	Mm.4758	NM_010425	Foxd3	Forkhead box D3
B11	Mm.4704	NM_008241	Foxg1	Forkhead box G1
B12	Mm.18064	NM_008061	G6pc	Glucose-6-phosphatase, catalytic
C01	Mm.272120	NM_008077	Gad1	Glutamic acid decarboxylase 1
C02	Mm.4784	NM_008078	Gad2	Glutamic acid decarboxylase 2
C03	Mm.5120	NM_008079	Galc	Galactosylceramidase
C04	Mm.335973	NM_008089	Gata1	GATA binding protein 1
C05	Mm.272747	NM_008090	Gata2	GATA binding protein 2
C06	Mm.329287	NM_010258	Gata6	GATA binding protein 6
C07	Mm.204730	NM_010262	Gbx2	Gastrulation brain homeobox 2
C08	Mm.299742	NM_008108	Gdf3	Growth differentiation factor 3
C09	Mm.1239	NM_010277	Gfap	Glial fibrillary acidic protein
C10	Mm.4746	NM_008213	Hand1	Heart and neural crest derivatives expressed transcript 1
C11	Mm.430844	NM_010402	Hand2	Heart and neural crest derivatives expressed transcript 2
C12	Mm.137268	NM_010419	Hes5	Hairy and enhancer of split 5 (Drosophila)
D01	Mm.202383	NM_008261	Hnf4a	Hepatic nuclear factor 4, alpha
D02	Mm.4987	NM_008318	Ibsp	Integrin binding sialoprotein
D03	Mm.3862	NM_010514	Igf2	Insulin-like growth factor 2
D04	Mm.4946	NM_008387	Ins2	Insulin II
D05	Mm.213873	NM_001005608	Itgb4	Integrin beta 4
D06	Mm.22662	NM_010660	Krt10	Keratin 10
D07	Mm.439898	NM_016958	Krt14	Keratin 14
D08	Mm.439699	NM_008471	Krt19	Keratin 19
D09	Mm.378911	NM_010094	Lefty1	Left right determination factor 1
D10	Mm.172897	NM_009582	Map3k12	Mitogen-activated protein kinase kinase kinase 12
D11	Mm.158200	NM_019977	Miox	Myo-inositol oxygenase
D12	Mm.103647	NM_013729	Mixl1	Mix1 homeobox-like 1 (Xenopus laevis)
E01	Mm.17510	NM_018857	Msln	Mesothelin
E02	Mm.477065	NM_030679	Myh1	Myosin, heavy polypeptide 1, skeletal muscle, adult
E03	Mm.250705	NM_013607	Myh11	Myosin, heavy polypeptide 11, smooth muscle
E04	Mm.457983	NM_080728	Myh7	Myosin, heavy polypeptide 7, cardiac muscle, beta
E05	Mm.7353	NM_010859	Myl3	Myosin, light polypeptide 3
E06	Mm.485537	NM_028016	Nanog	Nanog homeobox
E07	Mm.4636	NM_010894	Neurod1	Neurogenic differentiation 1
E08	Mm.42017	NM_009718	Neurog2	Neurogenin 2
E09	Mm.330639	NM_010919	Nkx2-2	NK2 transcription factor related, locus 2 (Drosophila)

Position	UniGene	GenBank	Symbol	Description
E10	Mm.482123	NM_008725	Nppa	Natriuretic peptide type A
E11	Mm.37289	NM_016967	Olig2	Oligodendrocyte transcription factor 2
E12	Mm.134516	NM_144841	Otx2	Orthodenticle homolog 2 (Drosophila)
F01	Mm.221403	NM_011058	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
F02	Mm.89918	NM_013723	Podxl	Podocalyxin-like
F03	Mm.234261	NM_138944	Pou4f2	POU domain, class 4, transcription factor 2
F04	Mm.17031	NM_013633	Pou5f1	POU domain, class 5, transcription factor 1
F05	Mm.6250	NM_008935	Prom1	Prominin 1
F06	Mm.215173	NM_011195	Ptcra	Pre T-cell antigen receptor alpha
F07	Mm.439726	NM_009038	Rcvrn	Recoverin
F08	Mm.4081	NM_009821	Runx1	Runt related transcription factor 1
F09	Mm.239871	NM_023868	Ryr2	Ryanodine receptor 2, cardiac
F10	Mm.46033	NM_147779	Sftpb	Surfactant associated protein B
F11	Mm.1321	NM_009160	Sftpd	Surfactant associated protein D
F12	Mm.256618	NM_080853	Slc17a6	Solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 6
G01	Mm.255631	NM_182993	Slc17a7	Solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 7
G02	Mm.18443	NM_031197	Slc2a2	Solute carrier family 2 (facilitated glucose transporter), member 2
G03	Mm.143404	NM_009508	Slc32a1	Solute carrier family 32 (GABA vesicular transporter), member 1
G04	Mm.188516	NM_013870	Smtn	Smoothelin
G05	Mm.279103	NM_011441	Sox17	SRY-box containing gene 17
G06	Mm.65396	NM_011443	Sox2	SRY-box containing gene 2
G07	Mm.42162	NM_011446	Sox7	SRY-box containing gene 7
G08	Mm.913	NM_009309	T	Brachyury
G09	Mm.28110	NM_146214	Tat	Tyrosine aminotransferase
G10	Mm.238127	NM_011661	Tyr	Tyrosinase
G11	Mm.285848	NM_009556	Zfp42	Zinc finger protein 42
G12	Mm.335350	NM_009573	Zic1	Zinc finger protein of the cerebellum 1
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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² 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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