RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Terminal Differentiation Markers

Cat. no. 330231 PAMM-048ZR

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 Terminal Differentiation Markers RT² Profiler PCR Array profiles the expression of 84 key genes important for the identification of specific cell types. The complex and time-consuming process of successfully differentiating embryonic stem cells (ESCs) or induced pluripotent stem cells (iPSCs) into a specific cell type requires verification by testing positive cellular markers before proceeding with experiments. However, further examination of other cell type markers serves as an equally important negative control confirming the specificity of the differentiation program. For example, iPSCs differentiated into arterial endothelial cells should express arterial markers but not venous markers. Or, the expression of cardiomyocyte markers confirms successful differentiation into that cell type, and the absence of markers for cells from other major organs (such as lung, pancreas and brain) insures the lack of other non-relevant cell types. This array provides the complete answer for cellular identification after differentiation. It includes one to three specific gene expression markers from 13 major organ or cellular types, with up to seven subgroups of more specific types of cells. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes for cellular identification with this array.

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

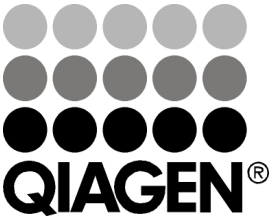
Shipping and storage

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.358571	NM_007424	Acan	Aggrecan
A02	Mm.3969	NM_009605	Adipoq	Adiponectin, C1Q and collagen domain containing
A03	Mm.16773	NM_009654	Alb	Albumin
A04	Mm.18625	NM_007472	Aqp1	Aquaporin 1
A05	Mm.20206	NM_009699	Aqp2	Aquaporin 2
A06	Mm.425160	NM_001032298	Bglap2	Bone gamma-carboxyglutamate protein 2
A07	Mm.4642	NM_007588	Calcr	Calcitonin receptor
A08	Mm.3924	NM_007617	Cav3	Caveolin 3
A09	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
A10	Mm.210361	NM_007648	Cd3e	CD3 antigen, epsilon polypeptide
A11	Mm.1355	NM_007655	Cd79a	CD79A antigen (immunoglobulin-associated alpha)
A12	Mm.21767	NM_009868	Cdh5	Cadherin 5
B01	Mm.442817	NM_009891	Chat	Choline acetyltransferase
B02	Mm.443177	NM_009925	Col10a1	Collagen, type X, alpha 1
B03	Mm.2423	NM_031163	Col2a1	Collagen, type II, alpha 1
B04	Mm.45071	NM_016685	Comp	Cartilage oligomeric matrix protein
B05	Mm.25377	NM_025350	Cpa1	Carboxypeptidase A1
B06	Mm.272085	NM_007802	Ctsk	Cathepsin K
B07	Mm.1401	NM_009911	Cxcr4	Chemokine (C-X-C motif) receptor 4
B08	Mm.6216	NM_010009	Cyp27b1	Cytochrome P450, family 27, subfamily b, polypeptide 1
B09	Mm.143719	NM_019454	Dll4	Delta-like 4 (Drosophila)
B10	Mm.209813	NM_010111	Efnb2	Ephrin B2
B11	Mm.2254	NM_010130	Emr1	EGF-like module containing, mucin-like, hormone receptor-like sequence 1
B12	Mm.582	NM_024406	Fabp4	Fatty acid binding protein 4, adipocyte
C01	Mm.18064	NM_008061	G6pc	Glucose-6-phosphatase, catalytic
C02	Mm.272120	NM_008077	Gad1	Glutamic acid decarboxylase 1
C03	Mm.5120	NM_008079	Galc	Galactosylceramidase
C04	Mm.45494	NM_008100	Gcg	Glucagon
C05	Mm.1239	NM_010277	Gfap	Glial fibrillary acidic protein
C06	Mm.379095	NM_021488	Ghrl	Ghrelin
C07	Mm.4987	NM_008318	Ibsp	Integrin binding sialoprotein
C08	Mm.4946	NM_008387	Ins2	Insulin II
C09	Mm.42242	NM_021459	Isl1	ISL1 transcription factor, LIM/homeodomain
C10	Mm.262106	NM_008401	Itgam	Integrin alpha M
C11	Mm.213873	NM_001005608	Itgb4	Integrin beta 4
C12	Mm.285	NM_010612	Kdr	Kinase insert domain protein receptor
D01	Mm.183137	NM_008473	Krt1	Keratin 1
D02	Mm.22662	NM_010660	Krt10	Keratin 10
D03	Mm.439898	NM_016958	Krt14	Keratin 14
D04	Mm.439699	NM_008471	Krt19	Keratin 19
D05	Mm.396078	NM_053247	Lyve1	Lymphatic vessel endothelial hyaluronan receptor 1
D06	Mm.309589	NM_194350	Mafa	V-maf musculoaponeurotic fibrosarcoma oncogene family, protein A (avian)
D07	Mm.330745	NM_010658	Mafb	V-maf musculoaponeurotic fibrosarcoma oncogene family, protein B (avian)
D08	Mm.252063	NM_010777	Mbp	Myelin basic protein
D09	Mm.158200	NM_019977	Miox	Myo-inositol oxygenase
D10	Mm.256966	NM_001039934	Mtap2	Microtubule-associated protein 2
D11	Mm.477065	NM_030679	Myh1	Myosin, heavy polypeptide 1, skeletal muscle, adult
D12	Mm.250705	NM_013607	Myh11	Myosin, heavy polypeptide 11, smooth muscle
E01	Mm.290003	NM_010856	Myh6	Myosin, heavy polypeptide 6, cardiac muscle, alpha
E02	Mm.457983	NM_080728	Myh7	Myosin, heavy polypeptide 7, cardiac muscle, beta
E03	Mm.1526	NM_010866	Myod1	Myogenic differentiation 1
E04	Mm.298283	NM_010904	Nefh	Neurofilament, heavy polypeptide
E05	Mm.289099	NM_130456	Nphs2	Nephrosis 2 homolog, podocin (human)
E06	Mm.482123	NM_008725	Nppa	Natriuretic peptide type A
E07	Mm.158143	NM_009697	Nr2f2	Nuclear receptor subfamily 2, group F, member 2
E08	Mm.271745	NM_008737	Nrp1	Neuropilin 1
E09	Mm.266341	NM_010939	Nrp2	Neuropilin 2

Position	UniGene	GenBank	Symbol	Description
E10	Mm.1372	NM_008806	Pde6b	Phosphodiesterase 6B, cGMP, rod receptor, beta polypeptide
E11	Mm.343951	NM_008816	Pecam1	Platelet/endothelial cell adhesion molecule 1
E12	Mm.16756	NM_021882	Pmel	Premelanosome protein
F01	Mm.56946	NM_008901	Pou3f4	POU domain, class 3, transcription factor 4
F02	Mm.234261	NM_138944	Pou4f2	POU domain, class 4, transcription factor 2
F03	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
F04	Mm.1269	NM_008918	Ppy	Pancreatic polypeptide
F05	Mm.132579	NM_008937	Prox1	Prospero-related homeobox 1
F06	Mm.215173	NM_011195	Ptcra	Pre T-cell antigen receptor alpha
F07	Mm.439726	NM_009038	Rcvrn	Recoverin
F08	Mm.41653	NM_020599	Rlbp1	Retinaldehyde binding protein 1
F09	Mm.46033	NM_147779	Sftpb	Surfactant associated protein B
F10	Mm.24040	NM_011359	Sftpc	Surfactant associated protein C
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.2453	NM_009215	Sst	Somatostatin
G06	Mm.283283	NM_011526	Tagln	Transgelin
G07	Mm.28110	NM_146214	Tat	Tyrosine aminotransferase
G08	Mm.1292	NM_009377	Th	Tyrosine hydroxylase
G09	Mm.40068	NM_023279	Tubb3	Tubulin, beta 3
G10	Mm.238127	NM_011661	Tyr	Tyrosinase
G11	Mm.30438	NM_031202	Tyrp1	Tyrosinase-related protein 1
G12	Mm.10826	NM_009470	Umod	Uromodulin
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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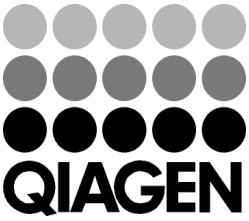

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