RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Diabetes

Cat. no. 330231 PAMM-023ZR

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 Diabetes RT² Profiler PCR Array profiles the expression of 84 genes related to the onset, development, and progression of diabetes. They include genes that contribute to obesity, insulin resistance, the early onset of diabetes, and complications from diabetes mellitus. These genes are grouped into six functional categories: receptors, transporters & channels; nuclear receptors; metabolic enzymes; secreted factors; signal transduction proteins; and transcription factors. Many of the genes included have a tissue-specific or tissue-biased expression pattern which can also be affected by different pathophysiological states. This array can be used to study models of obesity and diabetes, to screen for therapeutics and their targets, and to profile the effect of various epidemiological and environmental factors on gene expression in various tissues or cell lines. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to diabetes 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.754	NM_009598	Ace	Angiotensin I converting enzyme (peptidyl-dipeptidase A) 1
A02	Mm.282039	NM_134037	Acly	ATP citrate lyase
A03	Mm.57064	NM_013461	Adra1a	Adrenergic receptor, alpha 1a
A04	Mm.278475	NM_013462	Adrb3	Adrenergic receptor, beta 3
A05	Mm.301626	NM_007428	Agt	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A06	Mm.177194	NM_007434	Akt2	Thymoma viral proto-oncogene 2
A07	Mm.20206	NM_009699	Aqp2	Aquaporin 2
A08	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
A09	Mm.6272	NM_009915	Ccr2	Chemokine (C-C motif) receptor 2
A10	Mm.255003	NM_007642	Cd28	CD28 antigen
A11	Mm.322502	NM_011926	Ceacam1	Carcinoembryonic antigen-related cell adhesion molecule 1
A12	Mm.349667	NM_007678	Cebpa	CCAAT/enhancer binding protein (C/EBP), alpha
B01	Mm.390	NM_009843	Ctla4	Cytotoxic T-lymphocyte-associated protein 4
B02	Mm.1151	NM_010074	Dpp4	Dipeptidylpeptidase 4
B03	Mm.170276	NM_176933	Dusp4	Dual specificity phosphatase 4
B04	Mm.27254	NM_008813	Enpp1	Ectonucleotide pyrophosphatase/phosphodiesterase 1
B05	Mm.423078	NM_019395	Fbp1	Fructose bisphosphatase 1
B06	Mm.14092	NM_013519	Foxc2	Forkhead box C2
B07	Mm.4704	NM_008241	Foxg1	Forkhead box G1
B08	Mm.182291	NM_054039	Foxp3	Forkhead box P3
B09	Mm.18064	NM_008061	G6pc	Glucose-6-phosphatase, catalytic
B10	Mm.347430	NM_019468	G6pd2	Glucose-6-phosphate dehydrogenase 2
B11	Mm.45494	NM_008100	Gcg	Glucagon
B12	Mm.22329	NM_008101	Gcgr	Glucagon receptor
C01	Mm.390969	NM_021332	Glp1r	Glucagon-like peptide 1 receptor
C02	Mm.252391	NM_010271	Gpd1	Glycerol-3-phosphate dehydrogenase 1 (soluble)
C03	Mm.394930	NM_019827	Gsk3b	Glycogen synthase kinase 3 beta
C04	Mm.276389	NM_010442	Hmox1	Heme oxygenase (decycling) 1
C05	Mm.7226	NM_009330	Hnf1b	HNF1 homeobox B
C06	Mm.202383	NM_008261	Hnf4a	Hepatic nuclear factor 4, alpha
C07	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
C08	Mm.28366	NM_031156	Ide	Insulin degrading enzyme
C09	Mm.240327	NM_008337	Ifng	Interferon gamma
C10	Mm.405761	NM_010518	Igfbp5	Insulin-like growth factor binding protein 5
C11	Mm.277886	NM_010546	Ikbkb	Inhibitor of kappaB kinase beta
C12	Mm.874	NM_010548	Il10	Interleukin 10
D01	Mm.239707	NM_008352	Il12b	Interleukin 12B
D02	Mm.233802	NM_001008700	Il4ra	Interleukin 4 receptor, alpha
D03	Mm.1019	NM_031168	Il6	Interleukin 6
D04	Mm.476000	NM_010567	Inppl1	Inositol polyphosphate phosphatase-like 1
D05	Mm.46269	NM_008386	Ins1	Insulin I
D06	Mm.4952	NM_010570	Irs1	Insulin receptor substrate 1
D07	Mm.311337	NM_011951	Mapk14	Mitogen-activated protein kinase 14
D08	Mm.21495	NM_016700	Mapk8	Mitogen-activated protein kinase 8
D09	Mm.4636	NM_010894	Neurod1	Neurogenic differentiation 1
D10	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
D11	Mm.258415	NM_008713	Nos3	Nitric oxide synthase 3, endothelial cell
D12	Mm.259258	NM_010938	Nrf1	Nuclear respiratory factor 1
E01	Mm.260117	NM_008740	Nsf	N-ethylmaleimide sensitive fusion protein
E02	Mm.277779	NM_007415	Parp1	Poly (ADP-ribose) polymerase family, member 1
E03	Mm.8026	NM_011038	Pax4	Paired box gene 4
E04	Mm.266867	NM_011044	Pck1	Phosphoenolpyruvate carboxykinase 1, cytosolic
E05	Mm.389714	NM_008814	Pdx1	Pancreatic and duodenal homeobox 1
E06	Mm.19669	NM_133232	Pfkfb3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
E07	Mm.229108	NM_008840	Pik3cd	Phosphatidylinositol 3-kinase catalytic delta polypeptide
E08	Mm.259333	NM_001024955	Pik3r1	Phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)
E09	Mm.212789	NM_011144	Ppara	Peroxisome proliferator activated receptor alpha

Position	UniGene	GenBank	Symbol	Description
E10	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
E11	Mm.259072	NM_008904	Ppargc1a	Peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
E12	Mm.277916	NM_011201	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
F01	Mm.256926	NM_133198	Pygl	Liver glycogen phosphorylase
F02	Mm.9221	NM_009003	Rab4a	RAB4A, member RAS oncogene family
F03	Mm.1181	NM_022984	Retn	Resistin
F04	Mm.1461	NM_011346	Sell	Selectin, lymphocyte
F05	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F06	Mm.44158	NM_030683	Slc14a2	Solute carrier family 14 (urea transporter), member 2
F07	Mm.10661	NM_009204	Slc2a4	Solute carrier family 2 (facilitated glucose transporter), member 4
F08	Mm.245715	NM_009222	Snap23	Synaptosomal-associated protein 23
F09	Mm.45953	NM_011428	Snap25	Synaptosomal-associated protein 25
F10	Mm.290876	NM_013671	Sod2	Superoxide dismutase 2, mitochondrial
F11	Mm.278701	NM_011480	Srebf1	Sterol regulatory element binding transcription factor 1
F12	Mm.24867	NM_009294	Stx4a	Syntaxin 4A (placental)
G01	Mm.278865	NM_009295	Stxbp1	Syntaxin binding protein 1
G02	Mm.207203	NM_011505	Stxbp4	Syntaxin binding protein 4
G03	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G04	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G05	Mm.1258	NM_011609	Tnfrsf1a	Tumor necrosis factor receptor superfamily, member 1a
G06	Mm.235328	NM_011610	Tnfrsf1b	Tumor necrosis factor receptor superfamily, member 1b
G07	Mm.276018	NM_175093	Trib3	Tribbles homolog 3 (Drosophila)
G08	Mm.171378	NM_011671	Ucp2	Uncoupling protein 2 (mitochondrial, proton carrier)
G09	Mm.28643	NM_009497	Vamp2	Vesicle-associated membrane protein 2
G10	Mm.273930	NM_009498	Vamp3	Vesicle-associated membrane protein 3
G11	Mm.266767	NM_013933	Vapa	Vesicle-associated membrane protein, associated protein A
G12	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
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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