

RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse PPAR Targets

Cat. no. 330231 PAMM-149ZR

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 PPAR Targets RT² Profiler PCR Array profiles the expression of 84 key genes involved in peroxisome proliferator-activated receptor (PPAR) activation and response. The PPARs are nuclear hormone receptors important in regulating lipid metabolism, cellular differentiation, and proliferation. The 3 PPAR isoforms have similar functions but different tissue distributions: alpha (adipose tissue, liver, and muscle), beta/delta (widely-expressed), and gamma (adipose tissue and muscle). Ligands such as fatty acids activate these receptors causing them to heterodimerize with the retinoid X receptors (RXR) and initiate transcription of target genes. Multiple different coactivators and corepressors interact with the PPAR/RXR heterodimers to direct target gene specificity. Dysregulation of PPAR activity is a potential cause of metabolic syndrome-related disorders, such as insulin resistance and hypercholesterolemia. This array includes PPAR targets involved in adipogenesis, lipid transport and metabolism, and insulin signaling. Genes involved in PPAR ligand transport as well as transcription factors and cofactors are also included. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in PPAR signal transduction with this array.

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

Shipping and storage

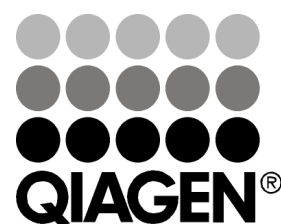
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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.245724	NM_177470	Acaa2	Acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase)
A02	Mm.2445	NM_007381	Acadl	Acyl-Coenzyme A dehydrogenase, long-chain
A03	Mm.10530	NM_007382	Acadm	Acyl-Coenzyme A dehydrogenase, medium chain
A04	Mm.356689	NM_015729	Acox1	Acyl-Coenzyme A oxidase 1, palmitoyl
A05	Mm.291503	NM_030721	Acox3	Acyl-Coenzyme A oxidase 3, pristanoyl
A06	Mm.210323	NM_007981	Acs1	Acyl-CoA synthetase long-chain family member 1
A07	Mm.427252	NM_001033606	Acs13	Acyl-CoA synthetase long-chain family member 3
A08	Mm.391337	NM_019477	Acs14	Acyl-CoA synthetase long-chain family member 4
A09	Mm.292056	NM_027976	Acs15	Acyl-CoA synthetase long-chain family member 5
A10	Mm.3969	NM_009605	Adipoq	Adiponectin, C1Q and collagen domain containing
A11	Mm.196189	NM_020581	Angptl4	Angiopoietin-like 4
A12	Mm.26743	NM_009692	Apoa1	Apolipoprotein A-I
B01	Mm.29738	NM_080434	Apoa5	Apolipoprotein A-V
B02	Mm.390161	NM_023114	Apoc3	Apolipoprotein C-III
B03	Mm.305152	NM_009696	ApoE	Apolipoprotein E
B04	Mm.315872	NM_183162	BC006779	CDNA sequence BC006779
B05	Mm.18628	NM_007643	Cd36	CD36 antigen
B06	Mm.100615	NM_177224	Chd9	Chromodomain helicase DNA binding protein 9
B07	Mm.200608	NM_013492	Clu	Clusterin
B08	Mm.18522	NM_013495	Cpt1a	Carnitine palmitoyltransferase 1a, liver
B09	Mm.227738	NM_009948	Cpt1b	Carnitine palmitoyltransferase 1b, muscle
B10	Mm.307620	NM_009949	Cpt2	Carnitine palmitoyltransferase 2
B11	Mm.453295	NM_133828	Creb1	CAMP responsive element binding protein 1
B12	Mm.132238	NM_001025432	Crebbp	CREB binding protein
C01	Mm.85083	NM_024264	Cyp27a1	Cytochrome P450, family 27, subfamily a, polypeptide 1
C02	Mm.10742	NM_010011	Cyp4a10	Cytochrome P450, family 4, subfamily a, polypeptide 10
C03	Mm.57029	NM_007824	Cyp7a1	Cytochrome P450, family 7, subfamily a, polypeptide 1
C04	Mm.22633	NM_010046	Dgat1	Diacylglycerol O-acyltransferase 1
C05	Mm.291776	NM_016772	Ech1	Enoyl coenzyme A hydratase 1, peroxisomal
C06	Mm.28100	NM_023737	Ehhadh	Enoyl-Coenzyme A, hydratase/3-hydroxyacyl Coenzyme A dehydrogenase
C07	Mm.275320	NM_007925	Elm	Elastin
C08	Mm.258397	NM_177821	Ep300	E1A binding protein p300
C09	Mm.28336	NM_025794	Etfdh	Electron transferring flavoprotein, dehydrogenase
C10	Mm.22126	NM_017399	Fabp1	Fatty acid binding protein 1, liver
C11	Mm.28398	NM_007980	Fabp2	Fatty acid binding protein 2, intestinal
C12	Mm.388886	NM_010174	Fabp3	Fatty acid binding protein 3, muscle and heart
D01	Mm.582	NM_024406	Fabp4	Fatty acid binding protein 4, adipocyte
D02	Mm.741	NM_010634	Fabp5	Fatty acid binding protein 5, epidermal
D03	Mm.142716	NM_008375	Fabp6	Fatty acid binding protein 6, ileal (gastrotropin)
D04	Mm.3644	NM_021272	Fabp7	Fatty acid binding protein 7, brain
D05	Mm.38901	NM_019699	Fads2	Fatty acid desaturase 2
D06	Mm.271665	NM_010208	Fgr	Gardner-Rasheed feline sarcoma viral (Fgr) oncogene homolog
D07	Mm.246682	NM_008194	Gyk	Glycerol kinase
D08	Mm.3879	NM_010431	Hif1a	Hypoxia inducible factor 1, alpha subunit
D09	Mm.289131	NM_008256	Hmgcs2	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2
D10	Mm.1777	NM_010477	Hspd1	Heat shock protein 1 (chaperonin)
D11	Mm.274846	NM_010562	Ilk	Integrin linked kinase
D12	Mm.4292	NM_013692	Klf10	Kruppel-like factor 10
E01	Mm.1514	NM_008509	Lpl	Lipoprotein lipase
E02	Mm.12926	NM_013634	Med1	Mediator complex subunit 1
E03	Mm.423037	NM_019966	Mlycd	Malonyl-CoA decarboxylase
E04	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
E05	Mm.476883	NM_008679	Ncoa3	Nuclear receptor coactivator 3
E06	Mm.27592	NM_019825	Ncoa6	Nuclear receptor coactivator 6
E07	Mm.22690	NM_013839	Nr1h3	Nuclear receptor subfamily 1, group H, member 3
E08	Mm.293626	NM_138648	Olr1	Oxidized low density lipoprotein (lectin-like) receptor 1

Position	UniGene	GenBank	Symbol	Description
E09	Mm.266867	NM_011044	Pck1	Phosphoenolpyruvate carboxykinase 1, cytosolic
E10	Mm.29856	NM_028994	Pck2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E11	Mm.10504	NM_011062	Pdk1	3-phosphoinositide dependent protein kinase 1
E12	Mm.6105	NM_011125	Pltp	Phospholipid transfer protein
F01	Mm.212789	NM_011144	Ppara	Peroxisome proliferator activated receptor alpha
F02	Mm.328914	NM_011145	Ppard	Peroxisome proliferator activator receptor delta
F03	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
F04	Mm.259072	NM_008904	Ppargc1a	Peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
F05	Mm.415302	NM_133249	Ppargc1b	Peroxisome proliferative activated receptor, gamma, coactivator 1 beta
F06	Mm.2415	NM_001081214	Pprc1	Peroxisome proliferative activated receptor, gamma, coactivator-related 1
F07	Mm.245395	NM_008960	Pten	Phosphatase and tensin homolog
F08	Mm.24624	NM_011305	Rxra	Retinoid X receptor alpha
F09	Mm.1243	NM_011306	Rxrb	Retinoid X receptor beta
F10	Mm.3475	NM_009107	Rxrg	Retinoid X receptor gamma
F11	Mm.267377	NM_009127	Scd1	Stearoyl-Coenzyme A desaturase 1
F12	Mm.351459	NM_019812	Sirt1	Sirtuin 1 (silent mating type information regulation 2, homolog) 1 (S. cerevisiae)
G01	Mm.42253	NM_011396	Slc22a5	Solute carrier family 22 (organic cation transporter), member 5
G02	Mm.38165	NM_011977	Slc27a1	Solute carrier family 27 (fatty acid transporter), member 1
G03	Mm.290044	NM_011978	Slc27a2	Solute carrier family 27 (fatty acid transporter), member 2
G04	Mm.330113	NM_011989	Slc27a4	Solute carrier family 27 (fatty acid transporter), member 4
G05	Mm.10984	NM_009512	Slc27a5	Solute carrier family 27 (fatty acid transporter), member 5
G06	Mm.258517	NM_001081072	Slc27a6	Solute carrier family 27 (fatty acid transporter), member 6
G07	Mm.436539	NM_025891	Smardc3	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3
G08	Mm.210815	NM_009166	Sorbs1	Sorbin and SH3 domain containing 1
G09	Mm.22845	NM_009271	Src	Rous sarcoma oncogene
G10	Mm.171323	NM_054089	Tgs1	Trimethylguanosine synthase homolog (S. cerevisiae)
G11	Mm.410189	NM_023719	Txnip	Thioredoxin interacting protein
G12	Mm.4177	NM_009463	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
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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