

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Insulin Signaling Pathway

Cat. no. 330231 PAMM-030ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

## Description

The Mouse Insulin Signaling Pathway RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes related to insulin-responsive genes. This array represents genes associated with the insulin receptor and target genes for insulin signaling. Genes involved in the metabolism of carbohydrates, lipids, and proteins and other related biological responses are also included. This array contains members of the PI3K and MAPK Pathways as well. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to insulin-responsive with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at –20°C.

**Note:** Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

**Note:** Open the package and store the products appropriately immediately on receipt.

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Acaca	Acox1	Adra1d	Aebp1	Akt1	Akt2	Akt3	Araf	Bcl2l1	Braf	Cap1	Cbl
<b>B</b>	Cebpa	Cebpb	Cfd	Dok1	Dok2	Dok3	Dusp14	Eif2b1	Eif4ebp1	Erc1	Fbp1	Fos
<b>C</b>	Frs2	Frs3	G6pc	G6pc2	Gab1	Gck	Gpd1	Grb10	Grb2	Gsk3b	Hk2	Hras1
<b>D</b>	Igf1r	Igf2	Igfbp1	Ins1	Ins3	Irs1	Irs2	Jun	KIF10	Kras	Ldfr	Lep
<b>E</b>	Map2k1	Mapk1	Mtor	Nck1	Nos2	Npy	Pck2	Pdpk1	Pik3ca	Pik3cb	Pik3r1	Pik3r2
<b>F</b>	Plkr	Pparg	Ppp1ca	Prkcc	Prkci	Prkcz	Pl	Ptpn1	Ptprf	Raf1	Retn	Rps6ka1
<b>G</b>	Rras	Rras2	Serpine1	Shc1	Slc27a4	Slc2a1	Sorbs1	Sos1	Srebf1	Tg	Ucp1	Vegfa
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.31374	NM_133360	Acaca	Acetyl-Coenzyme A carboxylase alpha
A02	Mm.356689	NM_015729	Acox1	Acyl-Coenzyme A oxidase 1, palmitoyl
A03	Mm.389380	NM_013460	Adra1d	Adrenergic receptor, alpha 1d
A04	Mm.4665	NM_009636	Aebp1	AE binding protein 1
A05	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A06	Mm.177194	NM_007434	Akt2	Thymoma viral proto-oncogene 2
A07	Mm.235194	NM_011785	Akt3	Thymoma viral proto-oncogene 3
A08	Mm.220946	NM_009703	Araf	V-raf murine sarcoma 3611 viral oncogene homolog
A09	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A10	Mm.245513	NM_139294	Braf	Braf transforming gene
A11	Mm.8687	NM_007598	Cap1	CAP, adenylate cyclase-associated protein 1 (yeast)
A12	Mm.266871	NM_007619	Cbl	Casitas B-lineage lymphoma
B01	Mm.349667	NM_007678	Cebpa	CCAAT/enhancer binding protein (C/EBP), alpha
B02	Mm.439656	NM_009883	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
B03	Mm.4407	NM_013459	Cfd	Complement factor D (adipsin)
B04	Mm.156	NM_010070	Dok1	Docking protein 1
B05	Mm.243323	NM_010071	Dok2	Docking protein 2
B06	Mm.33910	NM_013739	Dok3	Docking protein 3
B07	Mm.240885	NM_019819	Dusp14	Dual specificity phosphatase 14
B08	Mm.28839	NM_145371	Eif2b1	Eukaryotic translation initiation factor 2B, subunit 1 (alpha)
B09	Mm.6700	NM_007918	Eif4ebp1	Eukaryotic translation initiation factor 4E binding protein 1
B10	Mm.280913	NM_007948	Erc1	Excision repair cross-complementing rodent repair deficiency, complementation group 1
B11	Mm.423078	NM_019395	Fbp1	Fructose biphosphatase 1
B12	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C01	Mm.135965	NM_177798	Frs2	Fibroblast growth factor receptor substrate 2
C02	Mm.392206	NM_144939	Frs3	Fibroblast growth factor receptor substrate 3
C03	Mm.18064	NM_008061	G6pc	Glucose-6-phosphatase, catalytic
C04	Mm.140768	NM_021331	G6pc2	Glucose-6-phosphatase, catalytic, 2
C05	Mm.277409	NM_021356	Gab1	Growth factor receptor bound protein 2-associated protein 1
C06	Mm.220358	NM_010292	Gck	Glucokinase
C07	Mm.252391	NM_010271	Gpd1	Glycerol-3-phosphate dehydrogenase 1 (soluble)
C08	Mm.273117	NM_010345	Grb10	Growth factor receptor bound protein 10
C09	Mm.439649	NM_008163	Grb2	Growth factor receptor bound protein 2
C10	Mm.394930	NM_019827	Gsk3b	Glycogen synthase kinase 3 beta
C11	Mm.255848	NM_013820	Hk2	Hexokinase 2
C12	Mm.334313	NM_008284	Hras1	Harvey rat sarcoma virus oncogene 1
D01	Mm.275742	NM_010513	Igf1r	Insulin-like growth factor I receptor
D02	Mm.3862	NM_010514	Igf2	Insulin-like growth factor 2
D03	Mm.21300	NM_008341	Igfbp1	Insulin-like growth factor binding protein 1
D04	Mm.46269	NM_008386	Ins1	Insulin I
D05	Mm.476857	NM_013564	Ins3	Insulin-like 3
D06	Mm.4952	NM_010570	Irs1	Insulin receptor substrate 1
D07	Mm.407207	NM_001081212	Irs2	Insulin receptor substrate 2
D08	Mm.275071	NM_010591	Jun	Jun oncogene

Position	UniGene	GenBank	Symbol	Description
D09	Mm.4292	NM_013692	Klf10	Kruppel-like factor 10
D10	Mm.383182	NM_021284	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D11	Mm.3213	NM_010700	Ldlr	Low density lipoprotein receptor
D12	Mm.277072	NM_008493	Lep	Leptin
E01	Mm.248907	NM_008927	Map2k1	Mitogen-activated protein kinase kinase 1
E02	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
E03	Mm.21158	NM_020009	Mtor	Mechanistic target of rapamycin (serine/threonine kinase)
E04	Mm.181485	NM_010878	Nck1	Non-catalytic region of tyrosine kinase adaptor protein 1
E05	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
E06	Mm.154796	NM_023456	Npy	Neuropeptide Y
E07	Mm.29856	NM_028994	Pck2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E08	Mm.10504	NM_011062	Pdpk1	3-phosphoinositide dependent protein kinase 1
E09	Mm.260521	NM_008839	Pik3ca	Phosphatidylinositol 3-kinase, catalytic, alpha polypeptide
E10	Mm.213128	NM_029094	Pik3cb	Phosphatidylinositol 3-kinase, catalytic, beta polypeptide
E11	Mm.259333	NM_001024955	Pik3r1	Phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)
E12	Mm.12945	NM_008841	Pik3r2	Phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 2 (p85 beta)
F01	Mm.383180	NM_013631	Pklr	Pyruvate kinase liver and red blood cell
F02	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
F03	Mm.1970	NM_031868	Ppp1ca	Protein phosphatase 1, catalytic subunit, alpha isoform
F04	Mm.7980	NM_011102	Prkcc	Protein kinase C, gamma
F05	Mm.291554	NM_008857	Prkci	Protein kinase C, iota
F06	Mm.28561	NM_008860	Prkcz	Protein kinase C, zeta
F07	Mm.1270	NM_011164	Prl	Prolactin
F08	Mm.277916	NM_011201	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
F09	Mm.29855	NM_011213	Ptprf	Protein tyrosine phosphatase, receptor type, F
F10	Mm.184163	NM_029780	Raf1	V-raf-leukemia viral oncogene 1
F11	Mm.1181	NM_022984	Retn	Resistin
F12	Mm.301827	NM_009097	Rps6ka1	Ribosomal protein S6 kinase polypeptide 1
G01	Mm.389894	NM_009101	Rras	Harvey rat sarcoma oncogene, subgroup R
G02	Mm.276572	NM_025846	Rras2	Related RAS viral (r-ras) oncogene homolog 2
G03	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
G04	Mm.86595	NM_011368	Shc1	Src homology 2 domain-containing transforming protein C1
G05	Mm.330113	NM_011989	Slc27a4	Solute carrier family 27 (fatty acid transporter), member 4
G06	Mm.21002	NM_011400	Slc2a1	Solute carrier family 2 (facilitated glucose transporter), member 1
G07	Mm.210815	NM_009166	Sorbs1	Sorbin and SH3 domain containing 1
G08	Mm.434583	NM_009231	Sos1	Son of sevenless homolog 1 (Drosophila)
G09	Mm.278701	NM_011480	Srebfl	Sterol regulatory element binding transcription factor 1
G10	Mm.441333	NM_009375	Tg	Thyroglobulin
G11	Mm.4177	NM_009463	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT <sup>2</sup> SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT <sup>2</sup> SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

\* Larger kit sizes available; please inquire.

RT<sup>2</sup> 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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