

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Mouse Drug Metabolism

Cat. no. 330231 PAMM-002ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² 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 ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon [®] , DNA Engine Opticon 2; Stratagene Mx4000 [®]
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche [®] LightCycler [®] 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm [®] BioMark™



Sample & Assay Technologies

Description

The Mouse Drug Metabolism RT² Profiler PCR Array contains 84 genes critical in the metabolism of drugs, toxic chemicals, hormones and micronutrients important to pharmacology, endocrinology and food science. Drug metabolism is also often implicated in many disease states including cancer, intoxicification, addiction, and metabolic diseases. The genes encoding enzymes that are important for drug transport (such as metallothioneins and P-glycoproteins), phase I metabolism (specifically the P450 family), and phase II metabolism (such as transferases and hydrolases) are represented on the array. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to drug metabolism with this array.

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

Shipping and storage

RT² 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. RT² 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 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 (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Abcb1a	Abcb1b	Abcb4	Abcc1	Abp1	Adh1	Adh4	Adh5	Ahr	Alad	Aldh1a1	Alox12
B	Alox15	Alox5	ApoE	Arnt	Asna1	Blvra	Blvrb	Ces1g	Ces2c	Chst1	Comt	Cyb5r3
C	Cyp11b2	Cyp17a1	Cyp19a1	Cyp1a1	Cyp1a2	Cyp27b1	Cyp2c29	Cyp2e1	Cyp3a11	Cyp3a44	Cyp4b1	Ephx1
D	Ephx2	Faah	Fbp1	Gad1	Gad2	Gckr	Ggt1	Gpi1	Gpx1	Gpx2	Gpx3	Gpx5
E	Gsr	Gsta1	Gsta3	Gsta4	Gstm1	Gstm2	Gstm3	Gstm4	Gstm5	Gstp1	Gstt1	Gstz1
F	Hk2	Hsd17b1	Hsd17b2	Hsd17b3	Lpo	Mgst1	Mgst2	Mgst3	Mpo	Mt2	Mt3	Mthfr
G	Nat1	Nat2	Nos3	Nqo1	Pkfr	Pkm2	Pon1	Pon2	Pon3	Snn	Srd5a1	Srd5a2
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.207354	NM_011076	Abcb1a	ATP-binding cassette, sub-family B (MDR/TAP), member 1A
A02	Mm.146649	NM_011075	Abcb1b	ATP-binding cassette, sub-family B (MDR/TAP), member 1B
A03	Mm.297825	NM_008830	Abcb4	ATP-binding cassette, sub-family B (MDR/TAP), member 4
A04	Mm.196634	NM_008576	Abcc1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A05	Mm.213898	NM_029638	Abp1	Amiloride binding protein 1 (amine oxidase, copper-containing)
A06	Mm.2409	NM_007409	Adh1	Alcohol dehydrogenase 1 (class I)
A07	Mm.158750	NM_011996	Adh4	Alcohol dehydrogenase 4 (class II), pi polypeptide
A08	Mm.3874	NM_007410	Adh5	Alcohol dehydrogenase 5 (class III), chi polypeptide
A09	Mm.341377	NM_013464	Ahr	Aryl-hydrocarbon receptor
A10	Mm.6988	NM_008525	Alad	Aminolevulinate, delta-, dehydratase
A11	Mm.250866	NM_013467	Aldh1a1	Aldehyde dehydrogenase family 1, subfamily A1
A12	Mm.12286	NM_007440	Alox12	Arachidonate 12-lipoxygenase
B01	Mm.4584	NM_009660	Alox15	Arachidonate 15-lipoxygenase
B02	Mm.41072	NM_009662	Alox5	Arachidonate 5-lipoxygenase
B03	Mm.305152	NM_009696	ApoE	Apolipoprotein E
B04	Mm.250265	NM_009709	Arnt	Aryl hydrocarbon receptor nuclear translocator
B05	Mm.41475	NM_019652	Asna1	ArsA arsenite transporter, ATP-binding, homolog 1 (bacterial)
B06	Mm.22028	NM_026678	Blvra	Biliverdin reductase A
B07	Mm.24021	NM_144923	Blvrb	Biliverdin reductase B (flavin reductase (NADPH))
B08	Mm.22720	NM_021456	Ces1g	Carboxylesterase 1G
B09	Mm.28191	NM_145603	Ces2c	Carboxylesterase 2C
B10	Mm.38021	NM_023850	Chst1	Carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
B11	Mm.100940	NM_007744	Comt	Catechol-O-methyltransferase
B12	Mm.22560	NM_029787	Cyb5r3	Cytochrome b5 reductase 3
C01	Mm.377079	NM_009991	Cyp11b2	Cytochrome P450, family 11, subfamily b, polypeptide 2
C02	Mm.1262	NM_007809	Cyp17a1	Cytochrome P450, family 17, subfamily a, polypeptide 1
C03	Mm.5199	NM_007810	Cyp19a1	Cytochrome P450, family 19, subfamily a, polypeptide 1
C04	Mm.14089	NM_009992	Cyp1a1	Cytochrome P450, family 1, subfamily a, polypeptide 1
C05	Mm.15537	NM_009993	Cyp1a2	Cytochrome P450, family 1, subfamily a, polypeptide 2
C06	Mm.6216	NM_010009	Cyp27b1	Cytochrome P450, family 27, subfamily b, polypeptide 1
C07	Mm.20764	NM_007815	Cyp2c29	Cytochrome P450, family 2, subfamily c, polypeptide 29
C08	Mm.21758	NM_021282	Cyp2e1	Cytochrome P450, family 2, subfamily e, polypeptide 1
C09	Mm.332844	NM_007818	Cyp3a11	Cytochrome P450, family 3, subfamily a, polypeptide 11
C10	Mm.425301	NM_177380	Cyp3a44	Cytochrome P450, family 3, subfamily a, polypeptide 44
C11	Mm.1840	NM_007823	Cyp4b1	Cytochrome P450, family 4, subfamily b, polypeptide 1
C12	Mm.9075	NM_010145	Ephx1	Epoxide hydrolase 1, microsomal
D01	Mm.15295	NM_007940	Ephx2	Epoxide hydrolase 2, cytoplasmic
D02	Mm.256025	NM_010173	Faah	Fatty acid amide hydrolase
D03	Mm.423078	NM_019395	Fbp1	Fructose bisphosphatase 1
D04	Mm.272120	NM_008077	Gad1	Glutamic acid decarboxylase 1
D05	Mm.4784	NM_008078	Gad2	Glutamic acid decarboxylase 2
D06	Mm.100043	NM_144909	Gckr	Glucokinase regulatory protein
D07	Mm.4559	NM_008116	Ggt1	Gamma-glutamyltransferase 1
D08	Mm.589	NM_008155	Gpi1	Glucose phosphate isomerase 1
D09	Mm.1090	NM_008160	Gpx1	Glutathione peroxidase 1

Position	UniGene	GenBank	Symbol	Description
D10	Mm.441856	NM_030677	Gpx2	Glutathione peroxidase 2
D11	Mm.200916	NM_008161	Gpx3	Glutathione peroxidase 3
D12	Mm.1332	NM_010343	Gpx5	Glutathione peroxidase 5
E01	Mm.283573	NM_010344	Gsr	Glutathione reductase
E02	Mm.467426	NM_008181	Gsta1	Glutathione S-transferase, alpha 1 (Ya)
E03	Mm.394593	NM_010356	Gsta3	Glutathione S-transferase, alpha 3
E04	Mm.2662	NM_010357	Gsta4	Glutathione S-transferase, alpha 4
E05	Mm.37199	NM_010358	Gstm1	Glutathione S-transferase, mu 1
E06	Mm.440086	NM_008183	Gstm2	Glutathione S-transferase, mu 2
E07	Mm.440885	NM_010359	Gstm3	Glutathione S-transferase, mu 3
E08	Mm.31203	NM_026764	Gstm4	Glutathione S-transferase, mu 4
E09	Mm.282351	NM_010360	Gstm5	Glutathione S-transferase, mu 5
E10	Mm.299292	NM_013541	Gstp1	Glutathione S-transferase, pi 1
E11	Mm.2746	NM_008185	Gsth1	Glutathione S-transferase, theta 1
E12	Mm.29652	NM_010363	Gstz1	Glutathione transferase zeta 1 (maleylacetoacetate isomerase)
F01	Mm.255848	NM_013820	Hk2	Hexokinase 2
F02	Mm.188939	NM_010475	Hsd17b1	Hydroxysteroid (17-beta) dehydrogenase 1
F03	Mm.276466	NM_008290	Hsd17b2	Hydroxysteroid (17-beta) dehydrogenase 2
F04	Mm.5109	NM_008291	Hsd17b3	Hydroxysteroid (17-beta) dehydrogenase 3
F05	Mm.41236	NM_080420	Lpo	Lactoperoxidase
F06	Mm.14796	NM_019946	Mgst1	Microsomal glutathione S-transferase 1
F07	Mm.24679	NM_174995	Mgst2	Microsomal glutathione S-transferase 2
F08	Mm.218286	NM_025569	Mgst3	Microsomal glutathione S-transferase 3
F09	Mm.4668	NM_010824	Mpo	Myeloperoxidase
F10	Mm.147226	NM_008630	Mt2	Metallothionein 2
F11	Mm.2064	NM_013603	Mt3	Metallothionein 3
F12	Mm.89959	NM_010840	Mthfr	5,10-methylenetetrahydrofolate reductase
G01	Mm.14125	NM_008673	Nat1	N-acetyl transferase 1
G02	Mm.4695	NM_010874	Nat2	N-acetyltransferase 2 (arylamine N-acetyltransferase)
G03	Mm.258415	NM_008713	Nos3	Nitric oxide synthase 3, endothelial cell
G04	Mm.252	NM_008706	Nqo1	NAD(P)H dehydrogenase, quinone 1
G05	Mm.383180	NM_013631	Pklr	Pyruvate kinase liver and red blood cell
G06	Mm.326167	NM_011099	Pkm2	Pyruvate kinase, muscle
G07	Mm.237657	NM_011134	Pon1	Paraoxonase 1
G08	Mm.126984	NM_183308	Pon2	Paraoxonase 2
G09	Mm.9122	NM_173006	Pon3	Paraoxonase 3
G10	Mm.325800	NM_009223	Snn	Stannin
G11	Mm.451912	NM_175283	Srd5a1	Steroid 5 alpha-reductase 1
G12	Mm.38933	NM_053188	Srd5a2	Steroid 5 alpha-reductase 2
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 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 ² 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 ² 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.

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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