

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

Mouse Drug Metabolism: Phase II Enzymes

Cat. no. 330231 PAMM-069ZA

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 Phase II Enzymes RT² Profiler PCR Array contains 84 genes involved in the enzymatic processes of drug biotransformation. Phase II drug metabolism enzymes catalyze the conjugation of lipophilic compounds with hydrophilic functional groups or moieties to form water-soluble conjugates that can be cleared from cells and from the body. This array represents genes encoding the seven major classes of phase II drug metabolism enzymes catalyzing such reactions as glutathione conjugation, glucuronidation, sulfation, methylation, amino acid conjugation, epoxidation, and esterification. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of drug metabolism enzymes 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	A3galt2	A4galt	Aanat	Acsl1	Acsl3	Acsl4	Acsml	Acsml3	Agxt	Alg5	As3mt	Baat
B	Ccbl1	Ces1d	Ces1e	Ces1g	Ces2c	Ces5a	Chst7	Comt	Ddost	Eef1b2	Ephx1	Ephx2
C	Galnt1	Galnt3	Gamt	Gcnt1	Glyat	Gnmt	Gsta3	Gsta4	Gstk1	Gstm2	Gstm3	Gstm4
D	Gstm5	Gsto1	Gsto2	Gstp1	Gsth1	Gsth2	Has1	Hnmt	Inmt	Mgat1	Mgat1	Mgat2
E	Mgat3	Naa20	Nat1	Nat2	Nnmt	Nqa1	Nqa2	Pnmt	Pomgnt1	Ptges	Sat1	Sult1a1
F	Sult1b1	Sult1c1	Sult1c2	Sult1e1	Sult2b1	Sult4a1	Sult5a1	Sult6b1	Tpmt	Tst	Ugcg	Ugt1a1
G	Ugt1a2	Ugt1a6a	Ugt2a1	Ugt2a3	Ugt2b1	Ugt2b34	Ugt2b37	Ugt2b38	Ugt2b5	Ugt3a1	Ugt8a	Xdh
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.300900	NM_001009819	A3galt2	Alpha 1,3-galactosyltransferase 2 (isoglobotriaosylceramide synthase)
A02	Mm.323805	XM_139501	A4galt	Alpha 1,4-galactosyltransferase
A03	Mm.42233	NM_009591	Aanat	Arylalkylamine N-acetyltransferase
A04	Mm.210323	NM_007981	Acsl1	Acyl-CoA synthetase long-chain family member 1
A05	Mm.427252	NM_001033606	Acsl3	Acyl-CoA synthetase long-chain family member 3
A06	Mm.391337	NM_019477	Acsl4	Acyl-CoA synthetase long-chain family member 4
A07	Mm.427560	NM_054094	Acsml	Acyl-CoA synthetase medium-chain family member 1
A08	Mm.334199	NM_016870	Acsml3	Acyl-CoA synthetase medium-chain family member 3
A09	Mm.7457	NM_016702	Agxt	Alanine-glyoxylate aminotransferase
A10	Mm.144218	NM_025442	Alg5	Asparagine-linked glycosylation 5 homolog (yeast, dolichyl-phosphate beta-glucosyltransferase)
A11	Mm.28566	NM_020577	As3mt	Arsenic (+3 oxidation state) methyltransferase
A12	Mm.2859	NM_007519	Baat	Bile acid-Coenzyme A: amino acid N-acyltransferase
B01	Mm.216089	NM_172404	Ccbl1	Cysteine conjugate-beta lyase 1
B02	Mm.292803	NM_053200	Ces1d	Carboxylesterase 1D
B03	Mm.63490	NM_133660	Ces1e	Carboxylesterase 1E
B04	Mm.22720	NM_021456	Ces1g	Carboxylesterase 1G
B05	Mm.28191	NM_145603	Ces2c	Carboxylesterase 2C
B06	Mm.200622	NM_001003951	Ces5a	Carboxylesterase 5A
B07	Mm.44827	NM_021715	Chst7	Carbohydrate (N-acetylglucosamino) sulfotransferase 7
B08	Mm.100940	NM_007744	Comt	Catechol-O-methyltransferase
B09	Mm.7236	NM_007838	Ddost	Dolichyl-di-phosphooligosaccharide-protein glycotransferase
B10	Mm.2718	NM_018796	Eef1b2	Eukaryotic translation elongation factor 1 beta 2
B11	Mm.9075	NM_010145	Ephx1	Epoxide hydrolase 1, microsomal
B12	Mm.15295	NM_007940	Ephx2	Epoxide hydrolase 2, cytoplasmic
C01	Mm.30249	NM_013814	Galnt1	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglactosaminyltransferase 1
C02	Mm.439760	NM_015736	Galnt3	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglactosaminyltransferase 3
C03	Mm.7329	NM_010255	Gamt	Guanidinoacetate methyltransferase
C04	Mm.244825	NM_173442	Gcnt1	Glucosaminyl (N-acetyl) transferase 1, core 2
C05	Mm.39974	NM_145935	Glyat	Glycine-N-acyltransferase
C06	Mm.29395	NM_010321	Gnmt	Glycine N-methyltransferase
C07	Mm.394593	NM_010356	Gsta3	Glutathione S-transferase, alpha 3
C08	Mm.2662	NM_010357	Gsta4	Glutathione S-transferase, alpha 4
C09	Mm.267014	NM_029555	Gstk1	Glutathione S-transferase kappa 1
C10	Mm.440086	NM_008183	Gstm2	Glutathione S-transferase, mu 2
C11	Mm.440885	NM_010359	Gstm3	Glutathione S-transferase, mu 3
C12	Mm.31203	NM_026764	Gstm4	Glutathione S-transferase, mu 4
D01	Mm.282351	NM_010360	Gstm5	Glutathione S-transferase, mu 5
D02	Mm.378931	NM_010362	Gsto1	Glutathione S-transferase omega 1
D03	Mm.63791	NM_026619	Gsto2	Glutathione S-transferase omega 2
D04	Mm.299292	NM_013541	Gstp1	Glutathione S-transferase, pi 1
D05	Mm.2746	NM_008185	Gsth1	Glutathione S-transferase, theta 1
D06	Mm.24118	NM_010361	Gsth2	Glutathione S-transferase, theta 2

Position	UniGene	GenBank	Symbol	Description
D07	Mm.255701	NM_008215	Has1	Hyaluronan synthase1
D08	Mm.33120	NM_080462	Hnmt	Histamine N-methyltransferase
D09	Mm.299	NM_009349	Inmt	Indolethylamine N-methyltransferase
D10	Mm.196933	NM_010794	Mgat1	Mannoside acetylglucosaminyltransferase 1
D11	Mm.14796	NM_019946	Mgst1	Microsomal glutathione S-transferase 1
D12	Mm.24679	NM_174995	Mgst2	Microsomal glutathione S-transferase 2
E01	Mm.218286	NM_025569	Mgst3	Microsomal glutathione S-transferase 3
E02	Mm.151168	NM_026425	Naa20	N(alpha)-acetyltransferase 20, NatB catalytic subunit
E03	Mm.14125	NM_008673	Nat1	N-acetyl transferase 1
E04	Mm.4695	NM_010874	Nat2	N-acetyltransferase 2 (arylamine N-acetyltransferase)
E05	Mm.458542	NM_010924	Nnmt	Nicotinamide N-methyltransferase
E06	Mm.252	NM_008706	Nqo1	NAD(P)H dehydrogenase, quinone 1
E07	Mm.264036	NM_020282	Nqo2	NAD(P)H dehydrogenase, quinone 2
E08	Mm.57030	NM_008890	Pnmt	Phenylethanolamine-N-methyltransferase
E09	Mm.196045	NM_029786	Pomgnt1	Protein O-linked mannose beta1,2-N-acetylglucosaminyltransferase
E10	Mm.28768	NM_022415	Ptges	Prostaglandin E synthase
E11	Mm.2734	NM_009121	Sat1	Spermidine/spermine N1-acetyl transferase 1
E12	Mm.368982	NM_133670	Sult1a1	Sulfotransferase family 1A, phenol-preferring, member 1
F01	Mm.23502	NM_019878	Sult1b1	Sulfotransferase family 1B, member 1
F02	Mm.10108	NM_018751	Sult1c1	Sulfotransferase family, cytosolic, 1C, member 1
F03	Mm.19320	NM_026935	Sult1c2	Sulfotransferase family, cytosolic, 1C, member 2
F04	Mm.89655	NM_023135	Sult1e1	Sulfotransferase family 1E, member 1
F05	Mm.271634	NM_017465	Sult2b1	Sulfotransferase family, cytosolic, 2B, member 1
F06	Mm.248796	NM_013873	Sult4a1	Sulfotransferase family 4A, member 1
F07	Mm.6562	NM_020564	Sult5a1	Sulfotransferase family 5A, member 1
F08	Mm.45514	NM_001163625	Sult6b1	Sulfotransferase family, cytosolic, 6B, member 1
F09	Mm.10169	NM_016785	Tpmt	Thiopurine methyltransferase
F10	Mm.15312	NM_009437	Tst	Thiosulfate sulfurtransferase, mitochondrial
F11	Mm.198803	NM_011673	Ugcg	UDP-glucose ceramide glucosyltransferase
F12	Mm.300095	NM_201645	Ugt1a1	UDP glucuronosyltransferase 1 family, polypeptide A1
G01	Mm.300095	NM_013701	Ugt1a2	UDP glucuronosyltransferase 1 family, polypeptide A2
G02	Mm.466859	NM_145079	Ugt1a6a	UDP glucuronosyltransferase 1 family, polypeptide A6A
G03	Mm.154806	NM_053184	Ugt2a1	UDP glucuronosyltransferase 2 family, polypeptide A1
G04	Mm.482739	NM_028094	Ugt2a3	UDP glucuronosyltransferase 2 family, polypeptide A3
G05	Mm.26741	NM_152811	Ugt2b1	UDP glucuronosyltransferase 2 family, polypeptide B1
G06	Mm.281844	NM_153598	Ugt2b34	UDP glucuronosyltransferase 2 family, polypeptide B34
G07	Mm.160362	NM_053215	Ugt2b37	UDP glucuronosyltransferase 2 family, polypeptide B37
G08	Mm.212589	NM_133894	Ugt2b38	UDP glucuronosyltransferase 2 family, polypeptide B38
G09	Mm.291575	NM_009467	Ugt2b5	UDP glucuronosyltransferase 2 family, polypeptide B5
G10	Mm.482274	NM_207216	Ugt3a1	UDP glucosyltransferases 3 family, polypeptide A1
G11	Mm.306021	NM_011674	Ugt8a	UDP galactosyltransferase 8A
G12	Mm.11223	NM_011723	Xdh	Xanthine dehydrogenase
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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