

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

Mouse Hepatotoxicity

Cat. no. 330231 PAMM-093ZA

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 Hepatotoxicity RT² Profiler PCR Array profiles the expression of 84 key genes implicated as potential biomarkers of liver toxicity. Minimizing toxicity remains one of the major barriers to bringing a drug to market. The crucial role of the liver in drug metabolism makes it one of the major organs evoking drug-related toxic responses and an important target of toxicological studies. Genes that consistently exhibit increased or decreased expression during these toxic responses in model systems serve as markers to predict potential adverse clinical outcomes. This array compiles the most relevant potential biomarkers for five major drug-induced hepatotoxic diseases including cholestasis, steatosis, phospholipidosis, non-genotoxic hepatocarcinogenicity and necrosis, as well as generalized hepatotoxicity. The organization of genes by their predicted direction of expression change eases data analysis. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in hepatotoxic response 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	Abcb11	Abcb1a	Abcb4	Abcc2	Abcc3	Aldoa	Apex1	Asah1	Atp8b1	Avpr1a	BC031353	Bhmt
B	Big2	Car3	Casp3	Ccng1	Cd36	Cd68	Cdc14b	Cdkn1a	Col4a1	Cryl1	Cxcl12	Cyp1a2
C	Ddit4l	Ddx39	Dnajb11	Dnajc3	Fabp1	Fads1	Fam158a	Fasn	Fmo1	Fxc1	Gadd45a	Gclc
D	Gsr	Hao2	Hmox1	Hpn	Hyou1	Icam1	Igfals	Il6st	Ipo4	Krt18	Krt8	L2hgdh
E	Lgr5	Lpl	Lss	Maob	Map3k6	Mbl2	Mcm10	Mkipl	Mrps18b	Nqo1	Nus1	Osmr
F	Osta	Pdyn	Pla2g12a	Ppara	Psme3	Pygl	Rb1	Rdx	Rhbg	S100a8	Scd1	Serpina3n
G	Serpine1	Skil	Slc17a3	Slc2a3	Slc39a6	Srebf1	Tagln	Thrsp	Tmem2	Txnrd1	Wipi1	Yrdc
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.439855	NM_021022	Abcb11	ATP-binding cassette, sub-family B (MDR/TAP), member 11
A02	Mm.207354	NM_011076	Abcb1a	ATP-binding cassette, sub-family B (MDR/TAP), member 1A
A03	Mm.297825	NM_008830	Abcb4	ATP-binding cassette, sub-family B (MDR/TAP), member 4
A04	Mm.39054	NM_013806	Abcc2	ATP-binding cassette, sub-family C (CFTR/MRP), member 2
A05	Mm.23942	NM_029600	Abcc3	ATP-binding cassette, sub-family C (CFTR/MRP), member 3
A06	Mm.275831	NM_007438	Aldoa	Aldolase A, fructose-bisphosphate
A07	Mm.203	NM_009687	Apex1	Apurinic/apyrimidinic endonuclease 1
A08	Mm.22547	NM_019734	Asah1	N-acylsphingosine amidohydrolase 1
A09	Mm.270043	NM_001001488	Atp8b1	ATPase, class I, type 8B, member 1
A10	Mm.4351	NM_016847	Avpr1a	Arginine vasopressin receptor 1A
A11	Mm.208955	NM_153584	BC031353	CDNA sequence BC031353
A12	Mm.329582	NM_016668	Bhmt	Betaine-homocysteine methyltransferase
B01	Mm.392646	NM_007570	Big2	B-cell translocation gene 2, anti-proliferative
B02	Mm.300	NM_007606	Car3	Carbonic anhydrase 3
B03	Mm.34405	NM_009810	Casp3	Caspase 3
B04	Mm.2103	NM_009831	Ccng1	Cyclin G1
B05	Mm.18628	NM_007643	Cd36	CD36 antigen
B06	Mm.15819	NM_009853	Cd68	CD68 antigen
B07	Mm.25335	NM_172587	Cdc14b	CDC14 cell division cycle 14 homolog B (S. cerevisiae)
B08	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B09	Mm.738	NM_009931	Col4a1	Collagen, type IV, alpha 1
B10	Mm.25539	NM_030004	Cryl1	Crystallin, lambda 1
B11	Mm.303231	NM_021704	Cxcl12	Chemokine (C-X-C motif) ligand 12
B12	Mm.15537	NM_009993	Cyp1a2	Cytochrome P450, family 1, subfamily a, polypeptide 2
C01	Mm.250841	NM_030143	Ddit4l	DNA-damage-inducible transcript 4-like
C02	Mm.28222	NM_197982	Ddx39	DEAD (Asp-Glu-Ala-Asp) box polypeptide 39
C03	Mm.37516	NM_026400	Dnajb11	DnaJ (Hsp40) homolog, subfamily B, member 11
C04	Mm.12616	NM_008929	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
C05	Mm.22126	NM_017399	Fabp1	Fatty acid binding protein 1, liver
C06	Mm.30158	NM_146094	Fads1	Fatty acid desaturase 1
C07	Mm.40667	NM_033146	Fam158a	Family with sequence similarity 158, member A
C08	Mm.236443	NM_007988	Fasn	Fatty acid synthase
C09	Mm.976	NM_010231	Fmo1	Flavin containing monooxygenase 1
C10	Mm.220330	NM_019502	Fxc1	Fractured callus expressed transcript 1
C11	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha
C12	Mm.485389	NM_010295	Gclc	Glutamate-cysteine ligase, catalytic subunit
D01	Mm.283573	NM_010344	Gsr	Glutathione reductase
D02	Mm.281874	NM_019545	Hao2	Hydroxyacid oxidase 2
D03	Mm.276389	NM_010442	Hmox1	Heme oxygenase (decycling) 1
D04	Mm.19182	NM_008281	Hpn	Hepsin
D05	Mm.116721	NM_021395	Hyou1	Hypoxia up-regulated 1
D06	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
D07	Mm.3135	NM_008340	Igfals	Insulin-like growth factor binding protein, acid labile subunit
D08	Mm.4364	NM_010560	Il6st	Interleukin 6 signal transducer
D09	Mm.27546	NM_024267	Ipo4	Importin 4

Position	UniGene	GenBank	Symbol	Description
D10	Mm.22479	NM_010664	Krt18	Keratin 18
D11	Mm.358618	NM_031170	Krt8	Keratin 8
D12	Mm.103362	NM_145443	L2hgdh	L-2-hydroxyglutarate dehydrogenase
E01	Mm.42103	NM_010195	Lgr5	Leucine rich repeat containing G protein coupled receptor 5
E02	Mm.1514	NM_008509	Lpl	Lipoprotein lipase
E03	Mm.55075	NM_146006	Lss	Lanosterol synthase
E04	Mm.241656	NM_172778	Maob	Monoamine oxidase B
E05	Mm.36640	NM_016693	Map3k6	Mitogen-activated protein kinase kinase kinase 6
E06	Mm.30045	NM_010776	Mbl2	Mannose-binding lectin (protein C) 2
E07	Mm.23828	NM_027290	Mcm10	Minichromosome maintenance deficient 10 (S. cerevisiae)
E08	Mm.34213	NM_021455	Mlxip1	MLX interacting protein-like
E09	Mm.29484	NM_025878	Mrps18b	Mitochondrial ribosomal protein S18B
E10	Mm.252	NM_008706	Nqo1	NAD(P)H dehydrogenase, quinone 1
E11	Mm.199964	NM_030250	Nus1	Nuclear undecaprenyl pyrophosphate synthase 1 homolog (S. cerevisiae)
E12	Mm.10760	NM_011019	Osmr	Oncostatin M receptor
F01	Mm.476915	NM_145932	Osta	Organic solute transporter alpha
F02	Mm.6239	NM_018863	Pdyn	Prodynorphin
F03	Mm.151951	NM_183423	Pla2g12a	Phospholipase A2, group XIA
F04	Mm.212789	NM_011144	Ppara	Peroxisome proliferator activated receptor alpha
F05	Mm.288477	NM_011192	Psme3	Proteaseome (prosome, macropain) 28 subunit, 3
F06	Mm.256926	NM_133198	Pygl	Liver glycogen phosphorylase
F07	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F08	Mm.245746	NM_009041	Rdx	Radixin
F09	Mm.103777	NM_021375	Rhbg	Rhesus blood group-associated B glycoprotein
F10	Mm.21567	NM_013650	S100a8	S100 calcium binding protein A8 (calgranulin A)
F11	Mm.267377	NM_009127	Scd1	Stearoyl-Coenzyme A desaturase 1
F12	Mm.482074	NM_009252	Serpina3n	Serine (or cysteine) peptidase inhibitor, clade A, member 3N
G01	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
G02	Mm.15406	NM_011386	Skil	SKI-like
G03	Mm.27038	NM_134069	Slc17a3	Solute carrier family 17 (sodium phosphate), member 3
G04	Mm.395108	NM_011401	Slc2a3	Solute carrier family 2 (facilitated glucose transporter), member 3
G05	Mm.21688	NM_139143	Slc39a6	Solute carrier family 39 (metal ion transporter), member 6
G06	Mm.278701	NM_011480	Srebf1	Sterol regulatory element binding transcription factor 1
G07	Mm.283283	NM_011526	Tagln	Transgelin
G08	Mm.28585	NM_009381	Thrsp	Thyroid hormone responsive SPOT14 homolog (Rattus)
G09	Mm.329776	NM_031997	Tmem2	Transmembrane protein 2
G10	Mm.210155	NM_015762	Txnrd1	Thioredoxin reductase 1
G11	Mm.35817	NM_145940	Wipi1	WD repeat domain, phosphoinositide interacting 1
G12	Mm.258568	NM_153566	Yrdc	YrdC domain containing (E.coli)
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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