

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

Mouse Drug Metabolism: Phase I Enzymes

Cat. no. 330231 PAMM-068ZA

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™



Description

The Mouse Drug Metabolism: Phase I Enzymes RT² Profiler PCR Array contains 84 genes involved in phase I drug metabolism. Phase I drug metabolism enzymes make compounds more hydrophilic and add functional groups necessary for the completion of Phase II drug metabolism. This array represents genes involved in Phase I drug metabolism reactions including oxidation, reduction, hydrolysis, cyclization, and decyclization. Members of the Cytochrome P450 enzyme family that play a key role in mediating phase I drug metabolism reactions are also included on this array. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to drug phase I 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	Aadac	Adh1	Adh4	Adh5	Adh7	Aldh1a1	Aldh1a2	Aldh1a3	Aldh1a7	Aldh1b1	Aldh2	Aldh3a1
B	Aldh3a2	Aldh3b1	Aldh3b2	Aldh4a1	Aldh5a1	Aldh6a1	Aldh7a1	Aldh8a1	Aldh9a1	Cel	Cyp11a1	Cyp11b1
C	Cyp11b2	Cyp17a1	Cyp19a1	Cyp1a1	Cyp1a2	Cyp1b1	Cyp21a1	Cyp24a1	Cyp26a1	Cyp26b1	Cyp26c1	Cyp27a1
D	Cyp27b1	Cyp2a4	Cyp2a5	Cyp2c29	Cyp2c38	Cyp2c39	Cyp2c54	Cyp2c55	Cyp2c65	Cyp2c66	Cyp2d22	Cyp2e1
E	Cyp2f2	Cyp2r1	Cyp2s1	Cyp3a11	Cyp3a13	Cyp3a16	Cyp3a25	Cyp3a44	Cyp3a57	Cyp4a10	Cyp4a12a	Cyp4b1
F	Cyp4f14	Cyp4f15	Cyp4f18	Cyp7a1	Cyp7b1	Cyp8b1	Dhrs2	Dpyd	Esd	Fmo1	Fmo2	Fmo3
G	Fmo4	Fmo5	Gzma	Gzmb	Hsd17b10	Maoa	Maoab	Ptgs1	Ptgs2	Uchl1	Uchl3	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.24547	NM_023383	Aadac	Arylacetamide deacetylase (esterase)
A02	Mm.2409	NM_007409	Adh1	Alcohol dehydrogenase 1 (class I)
A03	Mm.158750	NM_011996	Adh4	Alcohol dehydrogenase 4 (class II), pi polypeptide
A04	Mm.3874	NM_007410	Adh5	Alcohol dehydrogenase 5 (class III), chi polypeptide
A05	Mm.8473	NM_009626	Adh7	Alcohol dehydrogenase 7 (class IV), mu or sigma polypeptide
A06	Mm.250866	NM_013467	Aldh1a1	Aldehyde dehydrogenase family 1, subfamily A1
A07	Mm.42016	NM_009022	Aldh1a2	Aldehyde dehydrogenase family 1, subfamily A2
A08	Mm.140988	NM_053080	Aldh1a3	Aldehyde dehydrogenase family 1, subfamily A3
A09	Mm.14609	NM_011921	Aldh1a7	Aldehyde dehydrogenase family 1, subfamily A7
A10	Mm.331583	NM_028270	Aldh1b1	Aldehyde dehydrogenase 1 family, member B1
A11	Mm.284446	NM_009656	Aldh2	Aldehyde dehydrogenase 2, mitochondrial
A12	Mm.4257	NM_007436	Aldh3a1	Aldehyde dehydrogenase family 3, subfamily A1
B01	Mm.398221	NM_007437	Aldh3a2	Aldehyde dehydrogenase family 3, subfamily A2
B02	Mm.109341	NM_026316	Aldh3b1	Aldehyde dehydrogenase 3 family, member B1
B03	Mm.34137	NM_001177438	Aldh3b2	Aldehyde dehydrogenase 3 family, member B2
B04	Mm.273571	NM_175438	Aldh4a1	Aldehyde dehydrogenase 4 family, member A1
B05	Mm.393311	NM_172532	Aldh5a1	Aldehyde dehydrogenase family 5, subfamily A1
B06	Mm.247510	NM_134042	Aldh6a1	Aldehyde dehydrogenase family 6, subfamily A1
B07	Mm.30250	NM_138600	Aldh7a1	Aldehyde dehydrogenase family 7, member A1
B08	Mm.90181	NM_178713	Aldh8a1	Aldehyde dehydrogenase 8 family, member A1
B09	Mm.330055	NM_019993	Aldh9a1	Aldehyde dehydrogenase 9, subfamily A1
B10	Mm.236017	NM_009885	Cel	Carboxyl ester lipase
B11	Mm.302865	NM_019779	Cyp11a1	Cytochrome P450, family 11, subfamily a, polypeptide 1
B12	Mm.322606	NM_001033229	Cyp11b1	Cytochrome P450, family 11, subfamily b, polypeptide 1
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.214016	NM_009994	Cyp1b1	Cytochrome P450, family 1, subfamily b, polypeptide 1
C07	Mm.440407	NM_009995	Cyp21a1	Cytochrome P450, family 21, subfamily a, polypeptide 1
C08	Mm.6575	NM_009996	Cyp24a1	Cytochrome P450, family 24, subfamily a, polypeptide 1
C09	Mm.42230	NM_007811	Cyp26a1	Cytochrome P450, family 26, subfamily a, polypeptide 1
C10	Mm.255246	NM_175475	Cyp26b1	Cytochrome P450, family 26, subfamily b, polypeptide 1
C11	Mm.457750	NM_001105201	Cyp26c1	Cytochrome P450, family 26, subfamily c, polypeptide 1
C12	Mm.85083	NM_024264	Cyp27a1	Cytochrome P450, family 27, subfamily a, polypeptide 1
D01	Mm.6216	NM_010009	Cyp27b1	Cytochrome P450, family 27, subfamily b, polypeptide 1
D02	Mm.154643	NM_009997	Cyp2a4	Cytochrome P450, family 2, subfamily a, polypeptide 4
D03	Mm.389848	NM_007812	Cyp2a5	Cytochrome P450, family 2, subfamily a, polypeptide 5
D04	Mm.20764	NM_007815	Cyp2c29	Cytochrome P450, family 2, subfamily c, polypeptide 29
D05	Mm.42100	NM_010002	Cyp2c38	Cytochrome P450, family 2, subfamily c, polypeptide 38
D06	Mm.42101	NM_010003	Cyp2c39	Cytochrome P450, family 2, subfamily c, polypeptide 39
D07	Mm.379575	NM_206537	Cyp2c54	Cytochrome P450, family 2, subfamily c, polypeptide 54
D08	Mm.142581	NM_028089	Cyp2c55	Cytochrome P450, family 2, subfamily c, polypeptide 55
D09	Mm.482578	NM_028191	Cyp2c65	Cytochrome P450, family 2, subfamily c, polypeptide 65

Position	UniGene	GenBank	Symbol	Description
D10	Mm.271190	NM_001011707	Cyp2c6	Cytochrome P450, family 2, subfamily c, polypeptide 66
D11	Mm.474216	NM_019823	Cyp2d22	Cytochrome P450, family 2, subfamily d, polypeptide 22
D12	Mm.21758	NM_021282	Cyp2e1	Cytochrome P450, family 2, subfamily e, polypeptide 1
E01	Mm.4515	NM_007817	Cyp2f2	Cytochrome P450, family 2, subfamily f, polypeptide 2
E02	Mm.108037	NM_177382	Cyp2r1	Cytochrome P450, family 2, subfamily r, polypeptide 1
E03	Mm.275188	NM_028775	Cyp2s1	Cytochrome P450, family 2, subfamily s, polypeptide 1
E04	Mm.332844	NM_007818	Cyp3a11	Cytochrome P450, family 3, subfamily a, polypeptide 11
E05	Mm.289886	NM_007819	Cyp3a13	Cytochrome P450, family 3, subfamily a, polypeptide 13
E06	Mm.378905	NM_007820	Cyp3a16	Cytochrome P450, family 3, subfamily a, polypeptide 16
E07	Mm.384461	NM_019792	Cyp3a25	Cytochrome P450, family 3, subfamily a, polypeptide 25
E08	Mm.425301	NM_177380	Cyp3a44	Cytochrome P450, family 3, subfamily a, polypeptide 44
E09	Mm.359379	NM_001100180	Cyp3a57	Cytochrome P450, family 3, subfamily a, polypeptide 57
E10	Mm.10742	NM_010011	Cyp4a10	Cytochrome P450, family 4, subfamily a, polypeptide 10
E11	Mm.276106	NM_177406	Cyp4a12a	Cytochrome P450, family 4, subfamily a, polypeptide 12a
E12	Mm.1840	NM_007823	Cyp4b1	Cytochrome P450, family 4, subfamily b, polypeptide 1
F01	Mm.426027	NM_022434	Cyp4f14	Cytochrome P450, family 4, subfamily f, polypeptide 14
F02	Mm.26539	NM_134127	Cyp4f15	Cytochrome P450, family 4, subfamily f, polypeptide 15
F03	Mm.160020	NM_024444	Cyp4f18	Cytochrome P450, family 4, subfamily f, polypeptide 18
F04	Mm.57029	NM_007824	Cyp7a1	Cytochrome P450, family 7, subfamily a, polypeptide 1
F05	Mm.316000	NM_007825	Cyp7b1	Cytochrome P450, family 7, subfamily b, polypeptide 1
F06	Mm.20889	NM_010012	Cyp8b1	Cytochrome P450, family 8, subfamily b, polypeptide 1
F07	Mm.85484	NM_027790	Dhrs2	Dehydrogenase/reductase member 2
F08	Mm.27907	NM_170778	Dpyd	Dihydropyrimidine dehydrogenase
F09	Mm.38055	NM_016903	Esd	Esterase D/formylglutathione hydrolase
F10	Mm.976	NM_010231	Fmo1	Flavin containing monooxygenase 1
F11	Mm.10929	NM_018881	Fmo2	Flavin containing monooxygenase 2
F12	Mm.2900	NM_008030	Fmo3	Flavin containing monooxygenase 3
G01	Mm.155164	NM_144878	Fmo4	Flavin containing monooxygenase 4
G02	Mm.385180	NM_010232	Fmo5	Flavin containing monooxygenase 5
G03	Mm.15510	NM_010370	Gzma	Granzyme A
G04	Mm.14874	NM_013542	Gzmb	Granzyme B
G05	Mm.6994	NM_016763	Hsd17b10	Hydroxysteroid (17-beta) dehydrogenase 10
G06	Mm.21108	NM_173740	Maoa	Monoamine oxidase A
G07	Mm.241656	NM_172778	Maob	Monoamine oxidase B
G08	Mm.275434	NM_008969	Ptgs1	Prostaglandin-endoperoxide synthase 1
G09	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
G10	Mm.29807	NM_011670	Uchl1	Ubiquitin carboxy-terminal hydrolase L1
G11	Mm.275970	NM_016723	Uchl3	Ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase)
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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