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

Human Drug Metabolism

Cat. no. 330231 PAHS-002ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human 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, intoxification, 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	ABCB1	ABCC1	ABP1	ADH1B	ADH1C	ADH4	ADH5	ADH6	AHR	ALAD	ALDH1A1	ALOX12
B	ALOX15	ALOX5	APOE	ARNT	ASNA1	BLVRA	BLVRB	CES1	CES2	CES3	CHST1	COMT
C	CYB5R3	CYP11B2	CYP17A1	CYP19A1	CYP1A1	CYP2B6	CYP2C19	CYP2C8	CYP2C9	CYP2D6	CYP2E1	CYP2F1
D	CYP2J2	CYP3A4	CYP3A5	EPHX1	FAAH	FBP1	GAD1	GAD2	GCKR	GPI	GPX1	GPX2
E	GPX3	GPX4	GPX5	GSR	GSTA3	GSTA4	GSTM2	GSTM3	GSTM5	GSTP1	GSTT1	GSTZ1
F	HK2	HSD17B1	HSD17B2	HSD17B3	LPO	MGST1	MGST2	MGST3	MPO	MT2A	MT3	MTHFR
G	NAT1	NAT2	NOS3	NQO1	PKLR	PKM2	PON1	PON2	PON3	SNN	SRD5A1	SRD5A2
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.489033	NM_000927	ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1
A02	Hs.709181	NM_004996	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A03	Hs.647097	NM_001091	ABP1	Amiloride binding protein 1 (amine oxidase (copper-containing))
A04	Hs.4	NM_000668	ADH1B	Alcohol dehydrogenase 1B (class I), beta polypeptide
A05	Hs.654537	NM_000669	ADH1C	Alcohol dehydrogenase 1C (class I), gamma polypeptide
A06	Hs.1219	NM_000670	ADH4	Alcohol dehydrogenase 4 (class II), pi polypeptide
A07	Hs.78989	NM_000671	ADH5	Alcohol dehydrogenase 5 (class III), chi polypeptide
A08	Hs.586161	NM_000672	ADH6	Alcohol dehydrogenase 6 (class V)
A09	Hs.171189	NM_001621	AHR	Aryl hydrocarbon receptor
A10	Hs.1227	NM_000031	ALAD	Aminolevulinate dehydratase
A11	Hs.76392	NM_000689	ALDH1A1	Aldehyde dehydrogenase 1 family, member A1
A12	Hs.654431	NM_000697	ALOX12	Arachidonate 12-lipoxygenase
B01	Hs.73809	NM_001140	ALOX15	Arachidonate 15-lipoxygenase
B02	Hs.89499	NM_000698	ALOX5	Arachidonate 5-lipoxygenase
B03	Hs.654439	NM_000041	APOE	Apolipoprotein E
B04	Hs.632446	NM_001668	ARNT	Aryl hydrocarbon receptor nuclear translocator
B05	Hs.465985	NM_004317	ASNA1	ArsA arsenite transporter, ATP-binding, homolog 1 (bacterial)
B06	Hs.488143	NM_000712	BLVRA	Biliverdin reductase A
B07	Hs.515785	NM_000713	BLVRB	Biliverdin reductase B (flavin reductase (NADPH))
B08	Hs.558865	NM_001266	CES1	Carboxylesterase 1
B09	Hs.282975	NM_198061	CES2	Carboxylesterase 2
B10	Hs.268700	NM_024922	CES3	Carboxylesterase 3
B11	Hs.104576	NM_003654	CHST1	Carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
B12	Hs.370408	NM_000754	COMT	Catechol-O-methyltransferase
C01	Hs.700572	NM_007326	CYB5R3	Cytochrome b5 reductase 3
C02	Hs.632054	NM_000498	CYP11B2	Cytochrome P450, family 11, subfamily B, polypeptide 2
C03	Hs.438016	NM_000102	CYP17A1	Cytochrome P450, family 17, subfamily A, polypeptide 1
C04	Hs.260074	NM_000103	CYP19A1	Cytochrome P450, family 19, subfamily A, polypeptide 1
C05	Hs.72912	NM_000499	CYP1A1	Cytochrome P450, family 1, subfamily A, polypeptide 1
C06	Hs.1360	NM_000767	CYP2B6	Cytochrome P450, family 2, subfamily B, polypeptide 6
C07	Hs.282409	NM_000769	CYP2C19	Cytochrome P450, family 2, subfamily C, polypeptide 19
C08	Hs.709188	NM_000770	CYP2C8	Cytochrome P450, family 2, subfamily C, polypeptide 8
C09	Hs.282624	NM_000771	CYP2C9	Cytochrome P450, family 2, subfamily C, polypeptide 9
C10	Hs.648256	NM_000106	CYP2D6	Cytochrome P450, family 2, subfamily D, polypeptide 6
C11	Hs.12907	NM_000773	CYP2E1	Cytochrome P450, family 2, subfamily E, polypeptide 1
C12	Hs.558318	NM_000774	CYP2F1	Cytochrome P450, family 2, subfamily F, polypeptide 1
D01	Hs.152096	NM_000775	CYP2J2	Cytochrome P450, family 2, subfamily J, polypeptide 2
D02	Hs.654391	NM_017460	CYP3A4	Cytochrome P450, family 3, subfamily A, polypeptide 4
D03	Hs.695915	NM_000777	CYP3A5	Cytochrome P450, family 3, subfamily A, polypeptide 5
D04	Hs.89649	NM_000120	EPHX1	Epoxide hydrolase 1, microsomal (xenobiotic)
D05	Hs.528334	NM_001441	FAAH	Fatty acid amide hydrolase
D06	Hs.494496	NM_000507	FBP1	Fructose-1,6-bisphosphatase 1
D07	Hs.420036	NM_000817	GAD1	Glutamate decarboxylase 1 (brain, 67kDa)
D08	Hs.231829	NM_000818	GAD2	Glutamate decarboxylase 2 (pancreatic islets and brain, 65kDa)
D09	Hs.89771	NM_001486	GCKR	Glucokinase (hexokinase 4) regulator

Position	UniGene	GenBank	Symbol	Description
D10	Hs.466471	NM_000175	GPI	Glucose-6-phosphate isomerase
D11	Hs.76686	NM_000581	GPX1	Glutathione peroxidase 1
D12	Hs.2704	NM_002083	GPX2	Glutathione peroxidase 2 (gastrointestinal)
E01	Hs.386793	NM_002084	GPX3	Glutathione peroxidase 3 (plasma)
E02	Hs.433951	NM_002085	GPX4	Glutathione peroxidase 4 (phospholipid hydroperoxidase)
E03	Hs.248129	NM_001509	GPX5	Glutathione peroxidase 5 (epididymal androgen-related protein)
E04	Hs.271510	NM_000637	GSR	Glutathione reductase
E05	Hs.102484	NM_000847	GSTA3	Glutathione S-transferase alpha 3
E06	Hs.485557	NM_001512	GSTA4	Glutathione S-transferase alpha 4
E07	Hs.279837	NM_000848	GSTM2	Glutathione S-transferase mu 2 (muscle)
E08	Hs.2006	NM_000849	GSTM3	Glutathione S-transferase mu 3 (brain)
E09	Hs.75652	NM_000851	GSTM5	Glutathione S-transferase mu 5
E10	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
E11	Hs.268573	NM_000853	GSTT1	Glutathione S-transferase theta 1
E12	Hs.655292	NM_001513	GSTZ1	Glutathione transferase zeta 1
F01	Hs.406266	NM_000189	HK2	Hexokinase 2
F02	Hs.654385	NM_000413	HSD17B1	Hydroxysteroid (17-beta) dehydrogenase 1
F03	Hs.162795	NM_002153	HSD17B2	Hydroxysteroid (17-beta) dehydrogenase 2
F04	Hs.477	NM_000197	HSD17B3	Hydroxysteroid (17-beta) dehydrogenase 3
F05	Hs.234742	NM_006151	LPO	Lactoperoxidase
F06	Hs.389700	NM_020300	MGST1	Microsomal glutathione S-transferase 1
F07	Hs.81874	NM_002413	MGST2	Microsomal glutathione S-transferase 2
F08	Hs.191734	NM_004528	MGST3	Microsomal glutathione S-transferase 3
F09	Hs.458272	NM_000250	MPO	Myeloperoxidase
F10	Hs.647371	NM_005953	MT2A	Metallothionein 2A
F11	Hs.73133	NM_005954	MT3	Metallothionein 3
F12	Hs.214142	NM_005957	MTHFR	Methylenetetrahydrofolate reductase (NAD(P)H)
G01	Hs.591847	NM_000662	NAT1	N-acetyltransferase 1 (arylamine N-acetyltransferase)
G02	Hs.2	NM_000015	NAT2	N-acetyltransferase 2 (arylamine N-acetyltransferase)
G03	Hs.707978	NM_000603	NOS3	Nitric oxide synthase 3 (endothelial cell)
G04	Hs.406515	NM_000903	NQO1	NAD(P)H dehydrogenase, quinone 1
G05	Hs.95990	NM_000298	PKLR	Pyruvate kinase, liver and RBC
G06	Hs.534770	NM_002654	PKM2	Pyruvate kinase, muscle
G07	Hs.370995	NM_000446	PON1	Paraoxonase 1
G08	Hs.530077	NM_000305	PON2	Paraoxonase 2
G09	Hs.440967	NM_000940	PON3	Paraoxonase 3
G10	Hs.700592	NM_003498	SNN	Stannin
G11	Hs.552	NM_001047	SRD5A1	Steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)
G12	Hs.458345	NM_000348	SRD5A2	Steroid-5-alpha-reductase, alpha polypeptide 2 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 2)
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² 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
RT² 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
RT² 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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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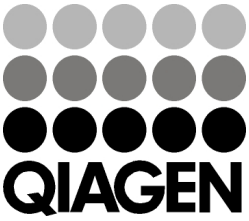

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