RT² Profiler PCR Array (Rotor-Gene® Format)

Human Drug Metabolism: Phase I Enzymes

Cat. no. 330231 PAHS-068ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Human 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 familty 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 the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.506908	NM_001086	AADAC	Arylacetamide deacetylase (esterase)
A02	Hs.654433	NM_000667	ADH1A	Alcohol dehydrogenase 1A (class I), alpha polypeptide
A03	Hs.4	NM_000668	ADH1B	Alcohol dehydrogenase 1B (class I), beta polypeptide
A04	Hs.654537	NM_000669	ADH1C	Alcohol dehydrogenase 1C (class I), gamma polypeptide
A05	Hs.1219	NM_000670	ADH4	Alcohol dehydrogenase 4 (class II), pi polypeptide
A06	Hs.78989	NM_000671	ADH5	Alcohol dehydrogenase 5 (class III), chi polypeptide
A07	Hs.586161	NM_000672	ADH6	Alcohol dehydrogenase 6 (class V)
A08	Hs.389	NM_000673	ADH7	Alcohol dehydrogenase 7 (class IV), mu or sigma polypeptide
A09	Hs.76392	NM_000689	ALDH1A1	Aldehyde dehydrogenase 1 family, member A1
A10	Hs.643455	NM_003888	ALDH1A2	Aldehyde dehydrogenase 1 family, member A2
A11	Hs.459538	NM_000693	ALDH1A3	Aldehyde dehydrogenase 1 family, member A3
A12	Hs.436219	NM_000692	ALDH1B1	Aldehyde dehydrogenase 1 family, member B1
B01	Hs.632733	NM_000690	ALDH2	Aldehyde dehydrogenase 2 family (mitochondrial)
B02	Hs.531682	NM_000691	ALDH3A1	Aldehyde dehydrogenase 3 family, member A1
B03	Hs.499886	NM_000382	ALDH3A2	Aldehyde dehydrogenase 3 family, member A2
B04	Hs.523841	NM_000694	ALDH3B1	Aldehyde dehydrogenase 3 family, member B1
B05	Hs.87539	NM_000695	ALDH3B2	Aldehyde dehydrogenase 3 family, member B2
B06	Hs.77448	NM_003748	ALDH4A1	Aldehyde dehydrogenase 4 family, member A1
B07	Hs.371723	NM_001080	ALDH5A1	Aldehyde dehydrogenase 5 family, member A1
B08	Hs.293970	NM_005589	ALDH6A1	Aldehyde dehydrogenase 6 family, member A1
B09	Hs.483239	NM_001182	ALDH7A1	Aldehyde dehydrogenase 7 family, member A1
B10	Hs.486520	NM_022568	ALDH8A1	Aldehyde dehydrogenase 8 family, member A1
B11	Hs.2533	NM_000696	ALDH9A1	Aldehyde dehydrogenase 9 family, member A1
B12	Hs.533258	NM_001807	CEL	Carboxyl ester lipase (bile salt-stimulated lipase)
C01	Hs.303980	NM_000781	CYP11A1	Cytochrome P450, family 11, subfamily A, polypeptide 1
C02	Hs.184927	NM_000497	CYP11B1	Cytochrome P450, family 11, subfamily B, polypeptide 1
C03	Hs.632054	NM_000498	CYP11B2	Cytochrome P450, family 11, subfamily B, polypeptide 2
C04	Hs.438016	NM_000102	CYP17A1	Cytochrome P450, family 17, subfamily A, polypeptide 1
C05	Hs.260074	NM_000103	CYP19A1	Cytochrome P450, family 19, subfamily A, polypeptide 1
C06	Hs.72912	NM_000499	CYP1A1	Cytochrome P450, family 1, subfamily A, polypeptide 1
C07	Hs.1361	NM_000761	CYP1A2	Cytochrome P450, family 1, subfamily A, polypeptide 2
C08	Hs.154654	NM_000104	CYP1B1	Cytochrome P450, family 1, subfamily B, polypeptide 1
C09	Hs.654479	NM_000500	CYP21A2	Cytochrome P450, family 21, subfamily A, polypeptide 2
C10	Hs.89663	NM_000782	CYP24A1	Cytochrome P450, family 24, subfamily A, polypeptide 1
C11	Hs.150595	NM_000783	CYP26A1	Cytochrome P450, family 26, subfamily A, polypeptide 1
C12	Hs.91546	NM_019885	CYP26B1	Cytochrome P450, family 26, subfamily B, polypeptide 1
D01	Hs.369993	NM_183374	CYP26C1	Cytochrome P450, family 26, subfamily C, polypeptide 1
D02	Hs.516700	NM_000784	CYP27A1	Cytochrome P450, family 27, subfamily A, polypeptide 1
D03	Hs.524528	NM_000785	CYP27B1	Cytochrome P450, family 27, subfamily B, polypeptide 1
D04	Hs.567252	NM_000766	CYP2A13	Cytochrome P450, family 2, subfamily A, polypeptide 13
D05	Hs.1360	NM_000767	CYP2B6	Cytochrome P450, family 2, subfamily B, polypeptide 6
D06	Hs.511872	NM_000772	CYP2C18	Cytochrome P450, family 2, subfamily C, polypeptide 18
D07	Hs.282409	NM_000769	CYP2C19	Cytochrome P450, family 2, subfamily C, polypeptide 19
D08	Hs.709188	NM_000770	CYP2C8	Cytochrome P450, family 2, subfamily C, polypeptide 8
D09	Hs.282624	NM_000771	CYP2C9	Cytochrome P450, family 2, subfamily C, polypeptide 9
D10	Hs.648256	NM_000106	CYP2D6	Cytochrome P450, family 2, subfamily D, polypeptide 6
D11	Hs.12907	NM_000773	CYP2E1	Cytochrome P450, family 2, subfamily E, polypeptide 1
D12	Hs.558318	NM_000774	CYP2F1	Cytochrome P450, family 2, subfamily F, polypeptide 1
E01	Hs.371427	NM_024514	CYP2R1	Cytochrome P450, family 2, subfamily R, polypeptide 1
E02	Hs.98370	NM_030622	CYP2S1	Cytochrome P450, family 2, subfamily S, polypeptide 1
E03	Hs.272795	NM_017781	CYP2W1	Cytochrome P450, family 2, subfamily W, polypeptide 1
E04	Hs.654391	NM_017460	CYP3A4	Cytochrome P450, family 3, subfamily A, polypeptide 4
E05	Hs.728751	NM_022820	CYP3A43	Cytochrome P450, family 3, subfamily A, polypeptide 43
E06	Hs.695915	NM_000777	CYP3A5	Cytochrome P450, family 3, subfamily A, polypeptide 5
E07	Hs.111944	NM_000765	CYP3A7	Cytochrome P450, family 3, subfamily A, polypeptide 7
E08	Hs.1645	NM_000778	CYP4A11	Cytochrome P450, family 4, subfamily A, polypeptide 11
E09	Hs.567807	NM_001010969	CYP4A22	Cytochrome P450, family 4, subfamily A, polypeptide 22

Position	UniGene	GenBank	Symbol	Description
E10	Hs.436317	NM_000779	CYP4B1	Cytochrome P450, family 4, subfamily B, polypeptide 1
E11	Hs.187393	NM_021187	CYP4F11	Cytochrome P450, family 4, subfamily F, polypeptide 11
E12	Hs.591000	NM_023944	CYP4F12	Cytochrome P450, family 4, subfamily F, polypeptide 12
F01	Hs.558423	NM_001082	CYP4F2	Cytochrome P450, family 4, subfamily F, polypeptide 2
F02	Hs.106242	NM_000896	CYP4F3	Cytochrome P450, family 4, subfamily F, polypeptide 3
F03	Hs.268554	NM_007253	CYP4F8	Cytochrome P450, family 4, subfamily F, polypeptide 8
F04	Hs.1644	NM_000780	CYP7A1	Cytochrome P450, family 7, subfamily A, polypeptide 1
F05	Hs.667720	NM_004820	CYP7B1	Cytochrome P450, family 7, subfamily B, polypeptide 1
F06	Hs.447793	NM_004391	CYP8B1	Cytochrome P450, family 8, subfamily B, polypeptide 1
F07	Hs.272499	NM_182908	DHRS2	Dehydrogenase/reductase (SDR family) member 2
F08	Hs.335034	NM_000110	DPYD	Dihydropyrimidine dehydrogenase
F09	Hs.432491	NM_001984	ESD	Esterase D
F10	Hs.1424	NM_002021	FMO1	Flavin containing monooxygenase 1
F11	Hs.144912	NM_001460	FMO2	Flavin containing monooxygenase 2 (non-functional)
F12	Hs.445350	NM_006894	FMO3	Flavin containing monooxygenase 3
G01	Hs.386502	NM_002022	FMO4	Flavin containing monooxygenase 4
G02	Hs.642706	NM_001461	FMO5	Flavin containing monooxygenase 5
G03	Hs.90708	NM_006144	GZMA	Granzyme A (granzyme 1, cytotoxic T-lymphocyte-associated serine esterase 3)
G04	Hs.1051	NM_004131	GZMB	Granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1)
G05	Hs.171280	NM_004493	HSD17B10	Hydroxysteroid (17-beta) dehydrogenase 10
G06	Hs.183109	NM_000240	MAOA	Monoamine oxidase A
G07	Hs.654473	NM_000898	MAOB	Monoamine oxidase B
G08	Hs.201978	NM_000962	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
G09	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
G10	Hs.518731	NM_004181	UCHL1	Ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)
G11	Hs.162241	NM_006002	UCHL3	Ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase)
G12	Hs.250	NM_000379	XDH	Xanthine dehydrogenase
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 ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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