RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Cancer Drug Resistance

Cat. no. 330231 PARN-004ZR

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 Rat Cancer Drug Resistance RT² Profiler PCR Array profiles the expression of 84 genes involved in the body's response to chemotherapy. The genes encoding important enzymes for drug resistance (such as the P-glycoproteins), phase I metabolism (specifically the P450 family), and phase II metabolism (such as various covalent modification enzymes) are all represented on the array. Cancer-related genes involved in aspects of resistance are also included on the array such as DNA repair enzymes, cell cycle regulators, growth factor and hormone receptors, and transcription factors. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cancer drug resistance and 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	Rn.154810	NM_133401	Abcb1a	ATP-binding cassette, sub-family B (MDR/TAP), member 1A
A02	Rn.144554	NM_012623	Abcb1b	ATP-binding cassette, subfamily B (MDR/TAP), member 1B
A03	Rn.82691	NM_012690	Abcb4	ATP-binding cassette, subfamily B (MDR/TAP), member 4
A04	Rn.10495	NM_022281	Abcc1	ATP-binding cassette, subfamily C (CFTR/MRP), member 1
A05	Rn.10265	NM_012833	Abcc2	ATP-binding cassette, subfamily C (CFTR/MRP), member 2
A06	Rn.205054	NM_080581	Abcc3	ATP-binding cassette, subfamily C (CFTR/MRP), member 3
A07	Rn.9491	NM_053924	Abcc5	ATP-binding cassette, subfamily C (CFTR/MRP), member 5
A08	Rn.29976	NM_031013	Abcc6	ATP-binding cassette, subfamily C (CFTR/MRP), member 6
A09	Rn.13131	NM_181381	Abcg2	ATP-binding cassette, subfamily G (WHITE), member 2
A10	Rn.91370	NM_013149	Ahr	Aryl hydrocarbon receptor
A11	Rn.11795	NM_001108331	Ap1s1	Adaptor-related protein complex 1, sigma 1 subunit
A12	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
B01	Rn.9813	NM_012502	Ar	Androgen receptor
B02	Rn.10520	NM_012780	Arnt	Aryl hydrocarbon receptor nuclear translocator
B03	Rn.214048	NM_001106821	Atm	Ataxia telangiectasia mutated homolog (human)
B04	Rn.10668	NM_017059	Bax	Bcl2-associated X protein
B05	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
B06	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
B07	Rn.100672	NM_001034163	Blmh	Bleomycin hydrolase
B08	Rn.48840	NM_012514	Brca1	Breast cancer 1
B09	Rn.103225	NM_031542	Brca2	Breast cancer 2
B10	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B11	Rn.15455	NM_001100821	Ccne1	Cyclin E1
B12	Rn.104460	NM_199501	Cdk2	Cyclin dependent kinase 2
C01	Rn.6115	NM_053593	Cdk4	Cyclin-dependent kinase 4
C02	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
C03	Rn.29897	NM_031762	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
C04	Rn.48717	NM_031550	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
C05	Rn.185816	NM_001009719	Cdkn2d	Similar to cyclin-dependent kinase inhibitor 2D
C06	Rn.3207	NM_001105716	Crabp1	Cellular retinoic acid binding protein 1
C07	Rn.10352	NM_012540	Cyp1a1	Cytochrome P450, family 1, subfamily a, polypeptide 1
C08	Rn.5563	NM_012541	Cyp1a2	Cytochrome P450, family 1, subfamily a, polypeptide 2
C09	Rn.91353	NM_001198676	Cyp2b2	Cytochrome P450, family 2, subfamily b, polypeptide 2
C10	Rn.10870	NM_019184	Cyp2c11	Cytochrome P450, subfamily 2, polypeptide 11
C11	Rn.82715	NM_138514	Cyp2c13	Cytochrome P450, family 2, subfamily c, polypeptide 13
C12	Rn.88025	NM_138512	Cyp2c22	Cytochrome P450, family 2, subfamily c, polypeptide 22
D01	Rn.185941	XM_001063361	Cyp2c37	Cytochrome P450, family 2, subfamily c, polypeptide 37
D02	Rn.1247	NM_017158	Cyp2c7	Cytochrome P450, family 2, subfamily c, polypeptide 7
D03	Rn.154478	XM_219933	Cyp2c79	Cytochrome P450, family 2, subfamily c, polypeptide 79
D04	Rn.26060	NM_138515	Cyp2d4	Cytochrome P450, family 2, subfamily d, polypeptide 4
D05	Rn.1372	NM_031543	Cyp2e1	Cytochrome P450, family 2, subfamily e, polypeptide 1
D06	Rn.202943	NM_153312	Cyp3a2	Cytochrome P450, family 3, subfamily a, polypeptide 2
D07	Rn.24681	NM_130400	Dhfr	Dihydrofolate reductase
D08	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
D09	Rn.204602	XM_001055949	Elk1	ELK1, member of ETS oncogene family
D10	Rn.3603	NM_012844	Ephx1	Epoxide hydrolase 1, microsomal
D11	Rn.93966	NM_017003	Erbb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
D12	Rn.10228	NM_017218	Erbb3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
E01	Rn.163078	NM_021687	Erbb4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
E02	Rn.44012	NM_001031644	Ercc3	Excision repair cross-complementing rodent repair deficiency, complementation group 3
E03	Rn.10595	NM_012689	Esr1	Estrogen receptor 1
E04	Rn.37460	NM_012754	Esr2	Estrogen receptor 2 (ER beta)
E05	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
E06	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
E07	Rn.145253	NM_001108841	Gabpa	GA binding protein transcription factor, alpha subunit

Position	UniGene	GenBank	Symbol	Description
E08	Rn.202944	NM_017014	Gstm1	Glutathione S-transferase mu 1
E09	Rn.10852	NM_024359	Hif1a	Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
E10	Rn.10957	NM_052807	Igf1r	Insulin-like growth factor 1 receptor
E11	Rn.270	NM_012756	Igf2r	Insulin-like growth factor 2 receptor
E12	Rn.10725	NM_019316	Mafb	V-maf musculoaponeurotic fibrosarcoma oncogene homolog B (avian)
F01	Rn.10617	NM_031517	Met	Met proto-oncogene
F02	Rn.10028	NM_022715	Mvp	Major vault protein
F03	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
F04	Rn.198370	NM_053854	Nat2	N-acetyltransferase 2
F05	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F06	Rn.204814	NM_001008349	Nfkb2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p49/p100
F07	Rn.8395	NM_030867	Nfkbib	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta
F08	Rn.129334	NM_199111	Nfkbie	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon
F09	Rn.9753	NM_013196	Ppara	Peroxisome proliferator activated receptor alpha
F10	Rn.96181	NM_013141	Ppard	Peroxisome proliferator-activated receptor delta
F11	Rn.23443	NM_013124	Pparg	Peroxisome proliferator-activated receptor gamma
F12	Rn.91057	NM_031528	Rara	Retinoic acid receptor, alpha
G01	Rn.220045	XM_223843	Rarb	Retinoic acid receptor, beta
G02	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
G03	Rn.108206	NM_012805	Rxra	Retinoid X receptor alpha
G04	Rn.49295	NM_206849	Rxrb	Retinoid X receptor beta
G05	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G06	Rn.32104	NM_012883	Sult1e1	Sulfotransferase family 1E, estrogen-preferring, member 1
G07	Rn.91572	NM_022615	Top1	Topoisomerase (DNA) I
G08	Rn.90996	NM_022183	Top2a	Topoisomerase (DNA) II alpha
G09	Rn.122005	XM_341386	Top2b	Topoisomerase (DNA) II beta
G10	Rn.54443	NM_030989	Tp53	Tumor protein p53
G11	Rn.24091	NM_031795	Ugcg	UDP-glucose ceramide glucosyltransferase
G12	Rn.22820	NM_001107874	Xpc	Xeroderma pigmentosum, complementation group C
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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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