

# RT<sup>2</sup> Profiler PCR Array (Rotor-Gene<sup>®</sup> Format)

## Rat Drug Transporters

Cat. no. 330231 PARN-070ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

### Description

The Rat Drug Transporters RT<sup>2</sup> Profiler PCR Array contains 84 transporter genes. Transporters play key roles in pharmacology, affecting entry and extrusion of drugs into and out of cells. Transporters important to the absorption, distribution, metabolism and excretion of many drugs are included on this array. In addition, transporters that contribute to sensitivity and resistance of tumor cells to anticancer agents are represented. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to drug transporters with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

### Shipping and storage

RT<sup>2</sup> 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 RT<sup>2</sup> 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: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.148916	NM_178095	Abca1	ATP-binding cassette, subfamily A (ABC1), member 1
A02	Rn.214144	NM_001106020	Abca13	ATP-binding cassette, subfamily A (ABC1), member 13
A03	Rn.67282	NM_001031637	Abca17	ATP-binding cassette, subfamily A (ABC1), member 17
A04	Rn.13115	NM_024396	Abca2	ATP-binding cassette, subfamily A (ABC1), member 2
A05	Rn.38406	XM_220219	Abca3	ATP-binding cassette, subfamily A (ABC1), member 3
A06	Rn.40415	NM_001107721	Abca4	ATP-binding cassette, subfamily A (ABC1), member 4
A07	Rn.98251	XM_221101	Abca9	ATP-binding cassette, subfamily A (ABC1), member 9
A08	Rn.14539	NM_031760	Abcb11	ATP-binding cassette, subfamily B (MDR/TAP), member 11
A09	Rn.144554	NM_012623	Abcb1b	ATP-binding cassette, subfamily B (MDR/TAP), member 1B
A10	Rn.82691	NM_012690	Abcb4	ATP-binding cassette, subfamily B (MDR/TAP), member 4
A11	N/A	XM_234725	Abcb5	ATP-binding cassette, subfamily B (MDR/TAP), member 5
A12	Rn.54408	NM_080582	Abcb6	ATP-binding cassette, subfamily B (MDR/TAP), member 6
B01	Rn.10495	NM_022281	Abcc1	ATP-binding cassette, subfamily C (CFTR/MRP), member 1
B02	Rn.39364	NM_001108201	Abcc10	ATP-binding cassette, subfamily C (CFTR/MRP), member 10
B03	Rn.214958	NM_199377	Abcc12	ATP-binding cassette, subfamily C (CFTR/MRP), member 12
B04	Rn.10265	NM_012833	Abcc2	ATP-binding cassette, subfamily C (CFTR/MRP), member 2
B05	Rn.205054	NM_080581	Abcc3	ATP-binding cassette, subfamily C (CFTR/MRP), member 3
B06	Rn.13195	NM_133411	Abcc4	ATP-binding cassette, subfamily C (CFTR/MRP), member 4
B07	Rn.9491	NM_053924	Abcc5	ATP-binding cassette, subfamily C (CFTR/MRP), member 5
B08	Rn.29976	NM_031013	Abcc6	ATP-binding cassette, subfamily C (CFTR/MRP), member 6
B09	Rn.163453	NM_001108821	Abcd1	ATP-binding cassette, subfamily D (ALD), member 1
B10	Rn.7024	NM_012804	Abcd3	ATP-binding cassette, subfamily D (ALD), member 3
B11	Rn.211008	NM_001013100	Abcd4	ATP-binding cassette, subfamily D (ALD), member 4
B12	Rn.14350	NM_001109883	Abcf1	ATP-binding cassette, subfamily F (GCN20), member 1
C01	Rn.13131	NM_181381	Abcg2	ATP-binding cassette, subfamily G (WHITE), member 2
C02	Rn.161892	NM_130414	Abcg8	ATP-binding cassette, subfamily G (WHITE), member 8
C03	Rn.1618	NM_012778	Aqp1	Aquaporin 1
C04	Rn.11111	NM_019157	Aqp7	Aquaporin 7
C05	Rn.30018	NM_022960	Aqp9	Aquaporin 9
C06	Rn.1869	NM_130823	Atp6v0c	ATPase, H <sup>+</sup> transporting, lysosomal V0 subunit C
C07	Rn.10554	NM_052803	Atp7a	ATPase, Cu <sup>++</sup> transporting, alpha polypeptide
C08	Rn.10025	NM_012511	Atp7b	ATPase, Cu <sup>++</sup> transporting, beta polypeptide
C09	Rn.10028	NM_022715	Mvp	Major vault protein
C10	Rn.9913	NM_017047	Slc10a1	Solute carrier family 10 (sodium/bile acid cotransporter family), member 1
C11	Rn.85891	NM_017222	Slc10a2	Solute carrier family 10 (sodium/bile acid cotransporter family), member 2
C12	Rn.10500	NM_057121	Slc15a1	Solute carrier family 15 (oligopeptide transporter), member 1
D01	Rn.89268	NM_031672	Slc15a2	Solute carrier family 15 (H <sup>+</sup> /peptide transporter), member 2
D02	Rn.6085	NM_012716	Slc16a1	Solute carrier family 16, member 1 (monocarboxylic acid transporter 1)
D03	Rn.208241	NM_147216	Slc16a2	Solute carrier family 16, member 2 (monocarboxylic acid transporter 8)
D04	Rn.10826	NM_030834	Slc16a3	Solute carrier family 16, member 3 (monocarboxylic acid transporter 4)
D05	Rn.9042	NM_017299	Slc19a1	Solute carrier family 19 (folate transporter), member 1
D06	Rn.19386	NM_001030024	Slc19a2	Solute carrier family 19 (thiamine transporter), member 2
D07	Rn.218520	NM_001108228	Slc19a3	Solute carrier family 19, member 3
D08	Rn.11186	NM_012697	Slc22a1	Solute carrier family 22 (organic cation transporter), member 1
D09	Rn.10555	NM_031584	Slc22a2	Solute carrier family 22 (organic cation transporter), member 2
D10	Rn.24231	NM_019230	Slc22a3	Solute carrier family 22 (extraneuronal monoamine transporter), member 3
D11	Rn.87849	NM_017224	Slc22a6	Solute carrier family 22 (organic anion transporter), member 6
D12	Rn.10009	NM_053537	Slc22a7	Solute carrier family 22 (organic anion transporter), member 7
E01	Rn.23348	NM_031332	Slc22a8	Solute carrier family 22 (organic anion transporter), member 8
E02	Rn.31066	NM_173302	Slc22a9	Solute carrier family 22 (organic anion transporter), member 9
E03	Rn.14686	XM_342640	Slc25a13	Solute carrier family 25, member 13 (citrin)
E04	Rn.10517	NM_053863	Slc28a1	Solute carrier family 28 (sodium-coupled nucleoside transporter), member 1
E05	Rn.10140	NM_031664	Slc28a2	Solute carrier family 28 (sodium-coupled nucleoside transporter), member 2
E06	Rn.81200	NM_080908	Slc28a3	Solute carrier family 28 (sodium-coupled nucleoside transporter), member 3
E07	Rn.5814	NM_031684	Slc29a1	Solute carrier family 29 (nucleoside transporters), member 1
E08	Rn.37517	NM_031738	Slc29a2	Solute carrier family 29 (nucleoside transporters), member 2
E09	Rn.3205	NM_138827	Slc2a1	Solute carrier family 2 (facilitated glucose transporter), member 1

Position	UniGene	GenBank	Symbol	Description
E10	Rn.89295	NM_012879	Slc2a2	Solute carrier family 2 (facilitated glucose transporter), member 2
E11	Rn.95055	NM_017102	Slc2a3	Solute carrier family 2 (facilitated glucose transporter), member 3
E12	Rn.2789	NM_133600	Slc31a1	Solute carrier family 31 (copper transporters), member 1
F01	Rn.16393	NM_181090	Slc38a2	Solute carrier family 38, member 2
F02	Rn.81033	NM_138854	Slc38a5	Solute carrier family 38, member 5
F03	Rn.11196	NM_017216	Slc3a1	Solute carrier family 3, member 1
F04	Rn.5801	NM_019283	Slc3a2	Solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2
F05	Rn.10224	NM_013033	Slc5a1	Solute carrier family 5 (sodium/glucose cotransporter), member 1
F06	Rn.133639	NM_001106383	Slc5a4a	Solute carrier family 5 (low affinity glucose cotransporter), member 4a
F07	Rn.28160	NM_001107673	Slc7a11	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 11
F08	Rn.47708	NM_001107078	Slc7a4	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 4
F09	Rn.32261	NM_017353	Slc7a5	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 5
F10	Rn.8066	NM_001107424	Slc7a6	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 6
F11	Rn.163294	NM_031341	Slc7a7	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 7
F12	Rn.82734	NM_053442	Slc7a8	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 8
G01	Rn.32225	NM_053929	Slc7a9	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 9
G02	Rn.91368	NM_030838	Slco1a5	Solute carrier organic anion transporter family, member 1a5
G03	Rn.9912	NM_130736	Slco1a6	Solute carrier organic anion transporter family, member 1a6
G04	Rn.48740	NM_031650	Slco1b3	Solute carrier organic anion transporter family, member 1b3
G05	Rn.9671	NM_022667	Slco2a1	Solute carrier organic anion transporter family, member 2a1
G06	Rn.44538	NM_080786	Slco2b1	Solute carrier organic anion transporter family, member 2b1
G07	Rn.102164	NM_177481	Slco3a1	Solute carrier organic anion transporter family, member 3a1
G08	Rn.67081	NM_133608	Slco4a1	Solute carrier organic anion transporter family, member 4a1
G09	Rn.10763	NM_032055	Tap1	Transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)
G10	Rn.202962	NM_032056	Tap2	Transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)
G11	Rn.54594	NM_031353	Vdac1	Voltage-dependent anion channel 1
G12	Rn.162037	NM_031354	Vdac2	Voltage-dependent anion channel 2
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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> 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.

RT<sup>2</sup> 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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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