

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

## Rat Cellular Stress Responses

Cat. no. 330231 PARN-019ZR

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 Cellular Stress Responses RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes involved in cellular stress response. This array includes genes encoding antioxidant and pro-oxidant enzymes, molecular chaperones and proteins involved in xenobiotic metabolism. Representative heat shock proteins and cytochrome P450 genes are also included. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cellular stress response 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.



---

Sample & Assay Technologies

## 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.44423	NM_013084	Acadsb	Acyl-Coenzyme A dehydrogenase, short/branched chain
A02	Rn.16320	NM_001106647	Bag1	BCL2-associated athanogene
A03	Rn.974	NM_022399	Calr	Calreticulin
A04	Rn.1762	NM_172008	Canx	Calnexin
A05	Rn.3001	NM_012520	Cat	Catalase
A06	Rn.2392	NM_001005905	Cct2	Chaperonin containing TCP1, subunit 2 (beta)
A07	Rn.203147	NM_199091	Cct3	Chaperonin containing Tcp1, subunit 3 (gamma)
A08	Rn.97889	NM_182814	Cct4	Chaperonin containing Tcp1, subunit 4 (delta)
A09	Rn.92645	NM_001004078	Cct5	Chaperonin containing Tcp1, subunit 5 (epsilon)
A10	Rn.62267	NM_001106603	Cct7	Chaperonin containing Tcp1, subunit 7 (eta)
A11	Rn.98524	NM_001105897	Cct8	Chaperonin containing Tcp1, subunit 8 (theta)
A12	Rn.201285	NM_133295	Ces1d	Carboxylesterase 1D
B01	Rn.161717	NM_031565	Ces1e	Carboxylesterase 1E
B02	Rn.1780	NM_053021	Clu	Clusterin
B03	Rn.127769	NM_012534	Cryaa	Crystallin, alpha A
B04	Rn.98208	NM_012935	Cryab	Crystallin, alpha B
B05	Rn.1401	NM_017286	Cyp11a1	Cytochrome P450, family 11, subfamily a, polypeptide 1
B06	Rn.10172	NM_012753	Cyp17a1	Cytochrome P450, family 17, subfamily a, polypeptide 1
B07	Rn.10352	NM_012540	Cyp1a1	Cytochrome P450, family 1, subfamily a, polypeptide 1
B08	Rn.5563	NM_012541	Cyp1a2	Cytochrome P450, family 1, subfamily a, polypeptide 2
B09	Rn.10125	NM_012940	Cyp1b1	Cytochrome P450, family 1, subfamily b, polypeptide 1
B10	Rn.2586	NM_031572	Cyp2c12	Cytochrome P450, family 2, subfamily c, polypeptide 12
B11	Rn.82715	NM_138514	Cyp2c13	Cytochrome P450, family 2, subfamily c, polypeptide 13
B12	Rn.185941	XM_001063361	Cyp2c37	Cytochrome P450, family 2, subfamily c, polypeptide 37
C01	Rn.1247	NM_017158	Cyp2c7	Cytochrome P450, family 2, subfamily c, polypeptide 7
C02	Rn.26060	NM_138515	Cyp2d4	Cytochrome P450, family 2, subfamily d, polypeptide 4
C03	Rn.1372	NM_031543	Cyp2e1	Cytochrome P450, family 2, subfamily e, polypeptide 1
C04	Rn.10817	NM_019303	Cyp2f4	Cytochrome P450, family 2, subfamily f, polypeptide 4
C05	Rn.202943	NM_153312	Cyp3a2	Cytochrome P450, family 3, subfamily a, polypeptide 2
C06	Rn.86651	NM_016999	Cyp4b1	Cytochrome P450, family 4, subfamily b, polypeptide 1
C07	Rn.10737	NM_012942	Cyp7a1	Cytochrome P450, family 7, subfamily a, polypeptide 1
C08	Rn.53969	NM_019138	Cyp7b1	Cytochrome P450, family 7, subfamily b, polypeptide 1
C09	Rn.64562	NM_022934	DnaJ1	DnaJ (Hsp40) homolog, subfamily A, member 1
C10	Rn.3904	NM_032079	DnaJ2	DnaJ (Hsp40) homolog, subfamily A, member 2
C11	Rn.198254	NM_001038595	DnaJ3	DnaJ (Hsp40) homolog, subfamily A, member 3
C12	Rn.198815	NM_001025411	DnaJ4	DnaJ (Hsp40) homolog, subfamily A, member 4
D01	Rn.128947	NM_001108441	DnaJb1	DnaJ (Hsp40) homolog, subfamily B, member 1
D02	Rn.14603	NM_001015021	DnaJb11	DnaJ (Hsp40) homolog, subfamily B, member 11
D03	Rn.20419	NM_001013907	DnaJb12	DnaJ (Hsp40) homolog, subfamily B, member 12
D04	Rn.198616	NM_001013076	DnaJb4	DnaJ (Hsp40) homolog, subfamily B, member 4
D05	Rn.92865	NM_001108004	DnaJb5	DnaJ (Hsp40) homolog, subfamily B, member 5
D06	Rn.129050	NM_001013209	DnaJb6	DnaJ (Hsp40) homolog, subfamily B, member 6
D07	Rn.29778	NM_012699	DnaJb9	DnaJ (Hsp40) homolog, subfamily B, member 9
D08	Rn.40786	XM_214522	DnaJc1	DnaJ (Hsp40) homolog, subfamily C, member 1
D09	Rn.91398	NM_001013196	DnaJc4	DnaJ (Hsp40) homolog, subfamily C, member 4
D10	Rn.100120	NM_024161	DnaJc5	DnaJ (Hsp40) homolog, subfamily C, member 5
D11	Rn.23812	NM_001107949	DnaJc6	DnaJ (Hsp40) homolog, subfamily C, member 6
D12	Rn.92155	NM_213625	DnaJc7	DnaJ (Hsp40) homolog, subfamily C, member 7
E01	Rn.105212	NM_001013168	DnaJc8	DnaJ (Hsp40) homolog, subfamily C, member 8
E02	Rn.16186	NM_001108865	DnaJc9	DnaJ (Hsp40) homolog, subfamily C, member 9
E03	Rn.54495	NM_022936	Ephx2	Epoxide hydrolase 2, cytoplasmic
E04	Rn.867	NM_012792	Fmo1	Flavin containing monooxygenase 1
E05	Rn.216582	NM_144562	Fmo4	Flavin containing monooxygenase 4
E06	Rn.7038	NM_144739	Fmo5	Flavin containing monooxygenase 5
E07	Rn.11323	NM_030826	Gpx1	Glutathione peroxidase 1
E08	Rn.3503	NM_183403	Gpx2	Glutathione peroxidase 2
E09	Rn.19721	NM_053906	Gsr	Glutathione reductase

Position	UniGene	GenBank	Symbol	Description
E10	Rn.10460	NM_031509	Gsta3	Glutathione S-transferase A3
E11	Rn.109452	NM_181371	Gstk1	Glutathione S-transferase kappa 1
E12	Rn.202944	NM_017014	Gstm1	Glutathione S-transferase mu 1
F01	Rn.25166	NM_001007602	Gsto1	Glutathione S-transferase omega 1
F02	Rn.3160	NM_012580	Hmox1	Heme oxygenase (decycling) 1
F03	Rn.10241	NM_024387	Hmox2	Heme oxygenase (decycling) 2
F04	Rn.2989	NM_133621	Hopx	HOP homeobox
F05	Rn.18598	NM_001107445	Hspa12a	Heat shock protein 12A
F06	Rn.1950	NM_031971	Hspa1a	Heat shock 70kD protein 1A
F07	Rn.187184	NM_212546	Hspa1l	Heat shock protein 1-like
F08	Rn.211303	NM_021863	Hspa2	Heat shock protein 2
F09	Rn.163092	NM_153629	Hspa4	Heat shock protein 4
F10	Rn.11088	NM_013083	Hspa5	Heat shock protein 5
F11	Rn.7535	NM_001100658	Hspa9	Heat shock protein 9
F12	Rn.3841	NM_031970	Hspb1	Heat shock protein 1
G01	Rn.22486	NM_130431	Hspb2	Heat shock protein beta 2
G02	Rn.20155	NM_031750	Hspb3	Heat shock protein 3
G03	Rn.102058	NM_022229	Hspd1	Heat shock protein 1 (chaperonin)
G04	Rn.106093	NM_012966	Hspe1	Heat shock protein 1 (chaperonin 10)
G05	Rn.136915	NM_001004279	Ppid	Peptidylprolyl isomerase D (cyclophilin D)
G06	Rn.98199	NM_017173	Serpinh1	Serine (or cysteine) peptidase inhibitor, clade H, member 1
G07	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G08	Rn.10488	NM_017051	Sod2	Superoxide dismutase 2, mitochondrial
G09	Rn.10358	NM_012880	Sod3	Superoxide dismutase 3, extracellular
G10	Rn.8796	NM_031122	St13	Suppression of tumorigenicity 13
G11	Rn.7102	NM_012670	Tcp1	T-complex 1
G12	Rn.202951	NM_017154	Xdh	Xanthine dehydrogenase
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 <sup>™</sup> 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.

Trademarks: QIAGEN<sup>®</sup>, Rotor-Gene<sup>®</sup>, Rotor-Disc<sup>™</sup> (QIAGEN Group); ROX<sup>™</sup> (Applied Biosystems or its subsidiaries); SYBR<sup>®</sup> (Molecular Probes, Inc.).

1067688 03/2011 © 2011 QIAGEN, all rights reserved.

[www.qiagen.com](http://www.qiagen.com)

Australia ■ 1-800-243-800

Austria ■ 0800/281010

Belgium ■ 0800-79612

Brazil ■ 0800-557779

Canada ■ 800-572-9613

China ■ 8621-3865-3865

Denmark ■ 80-885945

Finland ■ 0800-914416

France ■ 01-60-920-930

Germany ■ 02103-29-12000

Hong Kong ■ 800 933 965

Ireland ■ 1800 555 049

Italy ■ 800-787980

Japan ■ 03-6890-7300

Korea (South) ■ 080-000-7145

Luxembourg ■ 8002 2076

Mexico ■ 01-800-7742-436

The Netherlands ■ 0800 0229592

Norway ■ 800-18859

Singapore ■ 1800-742-4368

Spain ■ 91-630-7050

Sweden ■ 020-790282

Switzerland ■ 055-254-22-11

UK ■ 01293-422-911

USA ■ 800-426-8157



Sample & Assay Technologies