

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

Rat Cellular Stress Responses

Cat. no. 330231 PARN-019ZA

For pathway expression analysis

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



Sample & Assay Technologies

Description

The Rat Cellular Stress Responses RT² 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 *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	Acadsb	Bag1	Calr	Canx	Cat	Cct2	Cct3	Cct4	Cct5	Cct7	Cct8	Ces1d
B	Ces1e	Clu	Cryaa	Cryab	Cyp11a1	Cyp17a1	Cyp1a1	Cyp1a2	Cyp1b1	Cyp2c12	Cyp2c13	Cyp2c37
C	Cyp2c7	Cyp2d4	Cyp2e1	Cyp2f4	Cyp3a2	Cyp4b1	Cyp7a1	Cyp7b1	Dnaja1	Dnaja2	Dnaja3	Dnaja4
D	Dnajb1	Dnajb11	Dnajb12	Dnajb4	Dnajb5	Dnajb6	Dnajb9	Dnajc1	Dnajc4	Dnajc5	Dnajc6	Dnajc7
E	Dnajc8	Dnajc9	Ephx2	Fmo1	Fmo4	Fmo5	Gpx1	Gpx2	Gsr	Gsta3	Gstk1	Gstm1
F	Gsta1	Hmax1	Hmax2	Hopx	Hspa12a	Hspa1a	Hspa1l	Hspa2	Hspa4	Hspa5	Hspa9	Hspb1
G	Hspb2	Hspb3	Hspd1	Hspe1	Ppid	Serpinh1	Sod1	Sod2	Sod3	Stt3	Tcp1	Xdh
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² 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	Dnaja1	DnaJ (Hsp40) homolog, subfamily A, member 1
C10	Rn.3904	NM_032079	Dnaja2	DnaJ (Hsp40) homolog, subfamily A, member 2
C11	Rn.198254	NM_001038595	Dnaja3	DnaJ (Hsp40) homolog, subfamily A, member 3
C12	Rn.198815	NM_001025411	Dnaja4	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

Position	UniGene	GenBank	Symbol	Description
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
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, 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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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
RT ² 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
RT ² 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.

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