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

Rat Oxidative Stress

Cat. no. 330231 PARN-065ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Rat Oxidative Stress RT² Profiler PCR Array profiles the expression of 84 genes related to oxidative stress. Peroxidases are represented on this array including glutathione peroxidases (GPx) and peroxiredoxins (TPx). Also included are the genes involved in reactive oxygen species (ROS) metabolism, such as oxidative stress responsive genes and genes involved in superoxide metabolism such as superoxide dismutases (SOD). Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to oxidative stress 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	Alb	Als2	Aox1	Apc	Apoe	Cat	Ccl5	Ccs	Ctsb	Cyba	Cygb	Dhcr24
B	Dnm2	Duox1	Duox2	Ehd2	Epx	Ercc2	Ercc6	Fancc	Fmo2	Fth1	Gclc	Gclm
C	Gpx1	Gpx2	Gpx3	Gpx4	Gpx5	Gpx6	Gpx7	Gsr	Gstk1	Gstp1	Hba-a2	Hmox1
D	Hspa1a	Idh1	Ift172	Krt1	LOC367198	Lpo	Mb	Mpo	Ncf1	Ncf2	Ngb	Nos2
E	Nox4	Noxa1	Noxo1	Nqo1	Nudt1	Park7	Prdx1	Prdx2	Prdx3	Prdx4	Prdx5	Prdx6
F	Prnp	Psmb5	Ptgs1	Ptgs2	Rag2	Scd1	Sels	Sepp1	Serpinb1b	Slc38a1	Slc38a5	Sod1
G	Sod2	Sod3	Sqstm1	Srxn1	Tpo	Txn1	Txnip	Txnrd1	Txnrd2	Ucp2	Ucp3	Vim
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.202968	NM_134326	Alb	Albumin
A02	Rn.6408	NM_001013413	Als2	Amyotrophic lateral sclerosis 2 (juvenile) homolog (human)
A03	Rn.15681	NM_019363	Aox1	Aldehyde oxidase 1
A04	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A05	Rn.32351	NM_138828	Apoe	Apolipoprotein E
A06	Rn.3001	NM_012520	Cat	Catalase
A07	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
A08	Rn.12311	NM_053425	Ccs	Copper chaperone for superoxide dismutase
A09	Rn.100909	NM_022597	Ctsb	Cathepsin B
A10	Rn.5856	NM_024160	Cyba	Cytochrome b-245, alpha polypeptide
A11	Rn.105938	NM_130744	Cygb	Cytoglobin
A12	Rn.9470	NM_001080148	Dhcr24	24-dehydrocholesterol reductase
B01	Rn.11231	NM_013199	Dnm2	Dynamin 2
B02	Rn.162682	NM_153739	Duox1	Dual oxidase 1
B03	Rn.55542	NM_024141	Duox2	Dual oxidase 2
B04	Rn.16016	NM_001024897	Ehd2	EH-domain containing 2
B05	Rn.17695	NM_001107037	Epx	Eosinophil peroxidase
B06	Rn.74906	NM_001172809	Ercc2	Excision repair cross-complementing rodent repair deficiency, complementation group 2
B07	Rn.19370	NM_001107296	Ercc6	Excision repair cross-complementing rodent repair deficiency, complementation group 6
B08	Rn.10798	NM_012557	Fancc	Fanconi anemia, complementation group C
B09	Rn.3928	NM_144737	Fmo2	Flavin containing monooxygenase 2
B10	Rn.54447	NM_012848	Fth1	Ferritin, heavy polypeptide 1
B11	Rn.8365	NM_012815	Gclc	Glutamate-cysteine ligase, catalytic subunit
B12	Rn.2460	NM_017305	Gclm	Glutamate cysteine ligase, modifier subunit
C01	Rn.11323	NM_030826	Gpx1	Glutathione peroxidase 1
C02	Rn.3503	NM_183403	Gpx2	Glutathione peroxidase 2
C03	Rn.108074	NM_022525	Gpx3	Glutathione peroxidase 3
C04	Rn.3647	NM_017165	Gpx4	Glutathione peroxidase 4
C05	Rn.218434	NM_001105738	Gpx5	Glutathione peroxidase 5
C06	Rn.9852	NM_147165	Gpx6	Glutathione peroxidase 6
C07	Rn.4130	NM_001106673	Gpx7	Glutathione peroxidase 7
C08	Rn.19721	NM_053906	Gsr	Glutathione reductase
C09	Rn.109452	NM_181371	Gstk1	Glutathione S-transferase kappa 1
C10	Rn.87063	NM_012577	Gstp1	Glutathione S-transferase pi 1
C11	Rn.107334	NM_013096	Hba-a2	Hemoglobin alpha, adult chain 2
C12	Rn.3160	NM_012580	Hmox1	Heme oxygenase (decycling) 1
D01	Rn.1950	NM_031971	Hspa1a	Heat shock 70kD protein 1A
D02	Rn.3561	NM_031510	Idh1	Isocitrate dehydrogenase 1 (NADP+), soluble
D03	Rn.171849	NM_053792	Ift172	Intraflagellar transport 172 homolog (Chlamydomonas)
D04	Rn.31789	NM_001008802	Krt1	Keratin 1
D05	Rn.112309	XM_346005	LOC367198	Similar to Serine/threonine-protein kinase ATR (Ataxia telangiectasia and Rad3-related protein)
D06	Rn.60583	NM_001105829	Lpo	Lactoperoxidase

Position	UniGene	GenBank	Symbol	Description
D07	Rn.40511	NM_021588	Mb	Myoglobin
D08	Rn.47782	NM_001107036	Mpo	Myeloperoxidase
D09	Rn.38575	NM_053734	Ncf1	Neutrophil cytosolic factor 1
D10	Rn.162331	NM_001100984	Ncf2	Neutrophil cytosolic factor 2
D11	Rn.64645	NM_033359	Ngb	Neuroglobin
D12	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
E01	Rn.14744	NM_053524	Nox4	NADPH oxidase 4
E02	Rn.162651	NM_001100171	Noxa1	NADPH oxidase activator 1
E03	Rn.137764	NM_001106986	Noxo1	NADPH oxidase organizer 1
E04	Rn.11234	NM_017000	Nqo1	NAD(P)H dehydrogenase, quinone 1
E05	Rn.10669	NM_057120	Nudt1	Nudix (nucleoside diphosphate linked moiety X)-type motif 1
E06	Rn.30105	NM_057143	Park7	Parkinson disease (autosomal recessive, early onset) 7
E07	Rn.2845	NM_057114	Prdx1	Peroxiredoxin 1
E08	Rn.2511	NM_017169	Prdx2	Peroxiredoxin 2
E09	Rn.2011	NM_022540	Prdx3	Peroxiredoxin 3
E10	Rn.17958	NM_053512	Prdx4	Peroxiredoxin 4
E11	Rn.2944	NM_053610	Prdx5	Peroxiredoxin 5
E12	Rn.42	NM_053576	Prdx6	Peroxiredoxin 6
F01	Rn.3936	NM_012631	Prnp	Prion protein
F02	Rn.2	NM_001105727	Psmb5	Proteasome (prosome, macropain) subunit, beta type 5
F03	Rn.44404	NM_017043	Ptgs1	Prostaglandin-endoperoxide synthase 1
F04	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F05	N/A	NM_001100528	Rag2	Recombination activating gene 2
F06	Rn.1023	NM_139192	Scd1	Stearoyl-Coenzyme A desaturase 1
F07	Rn.4197	NM_173120	Sels	Selenoprotein S
F08	Rn.1451	NM_019192	Sepp1	Selenoprotein P, plasma, 1
F09	Rn.137930	XM_225268	Serpinb1b	Serine (or cysteine) peptidase inhibitor, clade B, member 1b
F10	Rn.162022	NM_138832	Slc38a1	Solute carrier family 38, member 1
F11	Rn.81033	NM_138854	Slc38a5	Solute carrier family 38, member 5
F12	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G01	Rn.10488	NM_017051	Sod2	Superoxide dismutase 2, mitochondrial
G02	Rn.10358	NM_012880	Sod3	Superoxide dismutase 3, extracellular
G03	Rn.107103	NM_181550	Sqstm1	Sequestosome 1
G04	Rn.2835	NM_001047858	Srxn1	Sulfiredoxin 1 homolog (S. cerevisiae)
G05	Rn.91199	NM_019353	Tpo	Thyroid peroxidase
G06	Rn.29777	NM_053800	Txn1	Thioredoxin 1
G07	Rn.2758	NM_001008767	Txnip	Thioredoxin interacting protein
G08	Rn.67581	NM_031614	Txnrd1	Thioredoxin reductase 1
G09	Rn.6300	NM_022584	Txnrd2	Thioredoxin reductase 2
G10	Rn.13333	NM_019354	Ucp2	Uncoupling protein 2 (mitochondrial, proton carrier)
G11	Rn.9902	NM_013167	Ucp3	Uncoupling protein 3 (mitochondrial, proton carrier)
G12	Rn.2710	NM_031140	Vim	Vimentin
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 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
RT² 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
RT² 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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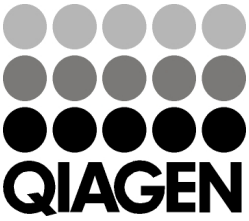

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