

RT² Profiler PCR Array (Rotor-Gene® Format)

Chinese Hamster Ovary (CHO) Cell Oxidative Stress

Cat. no. 330231 PAJJ-065ZR

For pathway expression analysis

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

Description

The Chinese Hamster Ovary (CHO) Cell 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). A set of controls present on each array enables data analysis using the $\Delta\Delta\text{CT}$ method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the 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 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.



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: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	N/A	XM_003497259	Alox12	Arachidonate 12-lipoxygenase
A02	N/A	XM_003497408	Als2	Amyotrophic lateral sclerosis 2 (juvenile) homolog (human)
A03	N/A	XM_003514022	Aox1	Aldehyde oxidase 1
A04	N/A	XM_003502570	Apc2	Adenomatosis polyposis coli 2
A05	N/A	XM_003497440	Cat	Catalase
A06	N/A	XM_003499769	Dnm2	Dynamin 2
A07	N/A	XM_003503788	Epx	Eosinophil peroxidase
A08	N/A	XM_003505530	Fmo2	Flavin containing monooxygenase 2
A09	N/A	XM_003513182	Fth1	Ferritin heavy chain 1
A10	N/A	NM_001246744	Gstp1	Glutathione S-transferase, pi 1
A11	N/A	XM_003496579	Ifi172	Intraflagellar transport 172 homolog (Chlamydomonas)
A12	N/A	XM_003513758	LOC100750530	Glutamate--cysteine ligase regulatory subunit-like
B01	N/A	XM_003504348	LOC100750691	Glutathione S-transferase kappa 1-like
B02	N/A	XM_003507912	LOC100750795	BAG family molecular chaperone regulator 2-like
B03	N/A	XM_003503791	LOC100751941	Lactoperoxidase-like
B04	N/A	XM_003503732	LOC100752019	Glutamate--cysteine ligase catalytic subunit-like
B05	N/A	XM_003509762	LOC100752248	Parkinson disease 7 domain-containing protein 1-like
B06	N/A	XM_003499637	LOC100752709	Alpha-galactosidase A-like
B07	N/A	XM_003501132	LOC100753200	Glutathione synthetase-like
B08	N/A	XM_003514044	LOC100753982	Fanconi anemia group C protein homolog
B09	N/A	XM_003497461	LOC100754577	V(D)J recombination-activating protein 2-like
B10	N/A	XM_003497679	LOC100754867	Peroxiredoxin-6-like
B11	N/A	XM_003498621	LOC100756038	Thioredoxin-interacting protein-like
B12	N/A	XM_003510575	LOC100756865	Prostaglandin reductase 1-like
C01	N/A	XM_003511957	LOC100756872	Heme oxygenase 1-like
C02	N/A	XM_003497978	LOC100756995	Cathepsin B-like
C03	N/A	XM_003510135	LOC100757246	Copper chaperone for superoxide dismutase-like
C04	N/A	XM_003499652	LOC100757970	Glutathione reductase, mitochondrial-like
C05	N/A	XM_003511274	LOC100758393	Peroxiredoxin-5, mitochondrial-like
C06	N/A	XM_003511768	LOC100758689	Mitochondrial uncoupling protein 3-like
C07	N/A	XM_003506911	LOC100758958	Isocitrate dehydrogenase [NADP] cytoplasmic-like
C08	N/A	XM_003511769	LOC100758980	Mitochondrial uncoupling protein 2-like
C09	N/A	XM_003511493	LOC100759653	Sulfiredoxin-1-like
C10	N/A	XM_003511332	LOC100760043	Keratin, type I cytoskeletal 14-like

Position	UniGene	GenBank	Symbol	Description
C11	N/A	XM_003495779	LOC100760062	Nitric oxide synthase, inducible-like
C12	N/A	XM_003507569	LOC100760320	Superoxide dismutase [Mn], mitochondrial-like
D01	N/A	XM_003499376	LOC100760386	Copper transport protein ATOX1-like
D02	N/A	XM_003508687	LOC100760905	NAD(P)H dehydrogenase [quinone] 1-like
D03	N/A	XM_003499518	LOC100762607	Four and a half LIM domains protein 2-like
D04	N/A	XM_003506847	LOC100762644	Cytoglobin-like
D05	N/A	XM_003499013	LOC100762792	Major prion protein-like
D06	N/A	XM_003511504	LOC100763245	Peroxiredoxin-4-like
D07	N/A	XM_003508970	LOC100764187	EH domain-containing protein 2-like
D08	N/A	XM_003499673	LOC100764455	Maleylacetoacetate isomerase-like
D09	N/A	XM_003498069	LOC100764526	Dual oxidase 2-like
D10	N/A	XM_003499675	LOC100765041	Neuroglobin-like
D11	N/A	XM_003495574	LOC100765091	Superoxide dismutase [Cu-Zn]-like
D12	N/A	XM_003499459	LOC100765222	Thioredoxin-like protein 1-like
E01	N/A	XM_003512803	LOC100765292	Extracellular superoxide dismutase [Cu-Zn]-like
E02	N/A	XM_003495502	LOC100766256	Serine/threonine-protein kinase ATR-like
E03	N/A	XM_003495094	LOC100766833	Cytochrome b-245 light chain-like
E04	N/A	XM_003501542	LOC100766881	NADPH oxidase organizer 1-like
E05	N/A	XM_003502426	LOC100766884	Oxidation resistance protein 1-like
E06	N/A	XM_003497134	LOC100768781	Interleukin-22-like
E07	N/A	XM_003511993	LOC100768954	Serum albumin-like
E08	N/A	XM_003504538	LOC100769204	Neutrophil cytosol factor 1-like
E09	N/A	XM_003495310	LOC100770299	DNA excision repair protein ERCC-6-like
E10	N/A	XM_003507285	LOC100771604	Phosphotyrosine phosphatase-like
E11	N/A	XM_003511297	LOC100773745	C-C motif chemokine 5-like
E12	N/A	XM_003505453	LOC100773810	Apolipoprotein E-like
F01	N/A	XM_003511169	LOC100773831	Nuclear receptor coactivator 7-like
F02	N/A	XM_003497738	LOC100774163	Interleukin-19-like
F03	N/A	XM_003504789	LOC100774391	Dual oxidase 1-like
F04	N/A	XM_003501407	LOC100774668	Thyroid peroxidase-like
F05	N/A	XM_003503792	Mpo	Myeloperoxidase
F06	N/A	XM_003515322	Myoglobin	Myoglobin-like
F07	N/A	XM_003502869	Ncf2	Neutrophil cytosolic factor 2
F08	N/A	XM_003499620	Nox1	NADPH oxidase 1
F09	N/A	XM_003511753	Nox4	NADPH oxidase 4
F10	N/A	XM_003510560	Noxa1	NADPH oxidase activator 1
F11	N/A	XM_003505919	Oxsr1	Oxidative-stress responsive 1
F12	N/A	NM_001246765	Prdx1	Peroxiredoxin 1
G01	N/A	NM_001246780	Prdx2	Peroxiredoxin 2
G02	N/A	XM_003512367	Ptgs1	Prostaglandin-endoperoxide synthase 1
G03	N/A	XM_003496774	Ptgs2	Prostaglandin-endoperoxide synthase 2

Position	UniGene	GenBank	Symbol	Description
G04	N/A	XM_003501408	Pxdn	Peroxidasin homolog (Drosophila)
G05	N/A	XM_003507633	Recql4	RecQ protein-like 4
G06	N/A	XM_003501167	Slc7a11	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 11
G07	N/A	XM_003505376	Sqstm1	Sequestosome 1
G08	N/A	XM_003505844	Txnrd1	Thioredoxin reductase 1
G09	N/A	XM_003502437	Txnrd2	Thioredoxin reductase 2
G10	N/A	XM_003495183	Txnrd3	Thioredoxin reductase 3
G11	N/A	XM_003503379	Vim	Vimentin
G12	N/A	XM_003500090	Xpa	Xeroderma pigmentosum, complementation group A
H01	N/A	NM_001244575	Actb	Actin, beta
H02	N/A	XM_003497123	Actr5	ARP5 actin-related protein 5 homolog (yeast)
H03	N/A	NM_001246674	B2m	Beta-2 microglobulin
H04	N/A	NM_001244854	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H05	N/A	XM_003503017	LOC100769768	Hypoxanthine-guanine phosphoribosyltransferase-like
H06	N/A	SA_00519	JGDC	Hamster 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 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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