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

Human Oxidative Stress

Cat. no. 330231 PAHS-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 Human 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	ALOX12	AOX1	APOE	ATOX1	BNIP3	CAT	CCL5	CCS	CYBB	CYGB	DHCR24
B	DUOX1	DUOX2	DUSP1	EPHX2	EPX	FOXM1	FTH1	GCLC	GCLM	GPX1	GPX2	GPX3
C	GPX4	GPX5	GPX6	GPX7	GSR	GSS	GSTP1	GSTZ1	GTF2I	HMOX1	HSPA1A	KRT1
D	LPO	MB	MBL2	MGST3	MPO	MPV17	MSRA	MT3	NCF1	NCF2	NOS2	NOX4
E	NOX5	NQO1	NUDT1	OXR1	OXSR1	PDLIM1	PNKP	PRDX1	PRDX2	PRDX3	PRDX4	PRDX5
F	PRDX6	PREX1	PRNP	PTGS1	PTGS2	PXDN	RNF7	SCARA3	SELS	SEPP1	SFTPD	SIRT2
G	SOD1	SOD2	SOD3	SQSTM1	SRXN1	STK25	TPO	TTN	TXN	TXNRD1	TXNRD2	UCP2
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.418167	NM_000477	ALB	Albumin
A02	Hs.654431	NM_000697	ALOX12	Arachidonate 12-lipoxygenase
A03	Hs.406238	NM_001159	AOX1	Aldehyde oxidase 1
A04	Hs.654439	NM_000041	APOE	Apolipoprotein E
A05	Hs.125213	NM_004045	ATOX1	ATX1 antioxidant protein 1 homolog (yeast)
A06	Hs.144873	NM_004052	BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3
A07	Hs.502302	NM_001752	CAT	Catalase
A08	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
A09	Hs.502917	NM_005125	CCS	Copper chaperone for superoxide dismutase
A10	Hs.292356	NM_000397	CYBB	Cytochrome b-245, beta polypeptide
A11	Hs.95120	NM_134268	CYGB	Cytoglobin
A12	Hs.498727	NM_014762	DHCR24	24-dehydrocholesterol reductase
B01	Hs.272813	NM_175940	DUOX1	Dual oxidase 1
B02	Hs.71377	NM_014080	DUOX2	Dual oxidase 2
B03	Hs.171695	NM_004417	DUSP1	Dual specificity phosphatase 1
B04	Hs.212088	NM_001979	EPHX2	Epoxide hydrolase 2, cytoplasmic
B05	Hs.279259	NM_000502	EPX	Eosinophil peroxidase
B06	Hs.239	NM_021953	FOXM1	Forkhead box M1
B07	Hs.645560	NM_002032	FTH1	Ferritin, heavy polypeptide 1
B08	Hs.654465	NM_001498	GCLC	Glutamate-cysteine ligase, catalytic subunit
B09	Hs.315562	NM_002061	GCLM	Glutamate-cysteine ligase, modifier subunit
B10	Hs.76686	NM_000581	GPX1	Glutathione peroxidase 1
B11	Hs.2704	NM_002083	GPX2	Glutathione peroxidase 2 (gastrointestinal)
B12	Hs.386793	NM_002084	GPX3	Glutathione peroxidase 3 (plasma)
C01	Hs.433951	NM_002085	GPX4	Glutathione peroxidase 4 (phospholipid hydroperoxidase)
C02	Hs.248129	NM_001509	GPX5	Glutathione peroxidase 5 (epididymal androgen-related protein)
C03	Hs.448570	NM_182701	GPX6	Glutathione peroxidase 6 (olfactory)
C04	Hs.43728	NM_015696	GPX7	Glutathione peroxidase 7
C05	Hs.271510	NM_000637	GSR	Glutathione reductase
C06	Hs.82327	NM_000178	GSS	Glutathione synthetase
C07	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
C08	Hs.655292	NM_001513	GSTZ1	Glutathione transferase zeta 1
C09	Hs.520459	NM_001518	GTF2I	General transcription factor IIi
C10	Hs.517581	NM_002133	HMOX1	Heme oxygenase (decycling) 1
C11	Hs.728810	NM_005345	HSPA1A	Heat shock 70kDa protein 1A
C12	Hs.80828	NM_006121	KRT1	Keratin 1
D01	Hs.234742	NM_006151	LPO	Lactoperoxidase
D02	Hs.517586	NM_005368	MB	Myoglobin
D03	Hs.499674	NM_000242	MBL2	Mannose-binding lectin (protein C) 2, soluble
D04	Hs.191734	NM_004528	MGST3	Microsomal glutathione S-transferase 3
D05	Hs.458272	NM_000250	MPO	Myeloperoxidase
D06	Hs.75659	NM_002437	MPV17	MpV17 mitochondrial inner membrane protein
D07	Hs.490981	NM_012331	MSRA	Methionine sulfoxide reductase A
D08	Hs.73133	NM_005954	MT3	Metallothionein 3
D09	Hs.647047	NM_000265	NCF1	Neutrophil cytosolic factor 1

Position	UniGene	GenBank	Symbol	Description
D10	Hs.587558	NM_000433	NCF2	Neutrophil cytosolic factor 2
D11	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
D12	Hs.371036	NM_016931	NOX4	NADPH oxidase 4
E01	Hs.657932	NM_024505	NOX5	NADPH oxidase, EF-hand calcium binding domain 5
E02	Hs.406515	NM_000903	NQO1	NAD(P)H dehydrogenase, quinone 1
E03	Hs.534331	NM_002452	NUDT1	Nudix (nucleoside diphosphate linked moiety X)-type motif 1
E04	Hs.148778	NM_181354	OXR1	Oxidation resistance 1
E05	Hs.475970	NM_005109	OXSR1	Oxidative-stress responsive 1
E06	Hs.368525	NM_020992	PDLIM1	PDZ and LIM domain 1
E07	Hs.78016	NM_007254	PNKP	Polynucleotide kinase 3'-phosphatase
E08	Hs.180909	NM_002574	PRDX1	Peroxiredoxin 1
E09	Hs.432121	NM_005809	PRDX2	Peroxiredoxin 2
E10	Hs.523302	NM_006793	PRDX3	Peroxiredoxin 3
E11	Hs.83383	NM_006406	PRDX4	Peroxiredoxin 4
E12	Hs.502823	NM_181652	PRDX5	Peroxiredoxin 5
F01	Hs.120	NM_004905	PRDX6	Peroxiredoxin 6
F02	Hs.153310	NM_020820	PREX1	Phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 1
F03	Hs.472010	NM_183079	PRNP	Prion protein
F04	Hs.201978	NM_000962	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
F05	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F06	Hs.332197	NM_012293	PXDN	Peroxidasin homolog (Drosophila)
F07	Hs.134623	NM_014245	RNF7	Ring finger protein 7
F08	Hs.128856	NM_182826	SCARA3	Scavenger receptor class A, member 3
F09	Hs.32148	NM_203472	SELS	Selenoprotein S
F10	Hs.275775	NM_005410	SEPP1	Selenoprotein P, plasma, 1
F11	Hs.253495	NM_003019	SFTPD	Surfactant protein D
F12	Hs.466693	NM_012237	SIRT2	Sirtuin 2
G01	Hs.443914	NM_000454	SOD1	Superoxide dismutase 1, soluble
G02	Hs.487046	NM_000636	SOD2	Superoxide dismutase 2, mitochondrial
G03	Hs.2420	NM_003102	SOD3	Superoxide dismutase 3, extracellular
G04	Hs.437277	NM_003900	SQSTM1	Sequestosome 1
G05	Hs.516830	NM_080725	SRXN1	Sulfiredoxin 1
G06	Hs.516807	NM_006374	STK25	Serine/threonine kinase 25
G07	Hs.467554	NM_000547	TPO	Thyroid peroxidase
G08	Hs.134602	NM_003319	TTN	Titin
G09	Hs.435136	NM_003329	TXN	Thioredoxin
G10	Hs.728817	NM_003330	TXNRD1	Thioredoxin reductase 1
G11	Hs.443430	NM_006440	TXNRD2	Thioredoxin reductase 2
G12	Hs.80658	NM_003355	UCP2	Uncoupling protein 2 (mitochondrial, proton carrier)
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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.

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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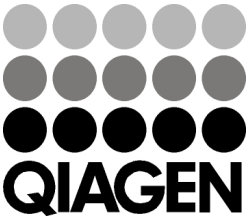

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