

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

Pig Oxidative Stress

Cat. no. 330231 PASS-065Z

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 Pig 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	BAG2	BNIP3	CAT	CCL5	CYGB	DHCR24	DUOX1	DUOX2
B	DUSP1	EPHX2	EPX	FHL2	FOXm1	FTH1	GCLC	GCLM	GLA	GP91-PHOX	GPX1	GPX2
C	GPX3	GPX4	GPX5	GSS	GSTZ1	HMOX1	HSP70.2	HSP90AA1	KRT1	LHPP	LOC100049683	LOC100516395
D	TTN	LOC100622575	LOC100739163	GSR	LOC733635	MB	MBL2	MGST3	MPO	MPV17	MSRA	MT-III
E	NCF1	NCF2	NCOA7	NOS2	NOX4	NOX5	NQO1	NUDT1	OXR1	OXS1	PDLIM1	PRDX1
F	PRDX2	PRDX3	PRDX4	PRDX5	PRDX6	PRNP	PTGR1	PTGS1	PTGS2	RNF7	SCARA3	SEPP1
G	SFTPD	SIRT2	SOD1	SOD3	SQSTM1	TRAPPC6B	TTNLOC100620261	TXN	TXNRD1	TXNRD2	UCP2	VIMP
H	ACTB	B2M	GAPDH	HPRT1	RPL13A	SGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	Ssc.56897	NM_001005208	ALB	Albumin	PPS00305A
A02	N/A	XM_003483092	ALOX12	Arachidonate 12-lipoxygenase	PPS71724A
A03	Ssc.30405	NM_001308473	AOX1	Aldehyde oxidase-like	PPS14572A
A04	Ssc.1342	NM_214308	APOE	Apolipoprotein E	PPS00882A
A05	N/A	XM_003128336	BAG2	BAG family molecular chaperone regulator 2-like	PPS14134A
A06	N/A	XM_003359404	BNIP3	BCL2/adenovirus E1B 19 kDa protein-interacting protein 3-like	PPS17954A
A07	Ssc.1018	NM_214301	CAT	Catalase	PPS00874A
A08	Ssc.22030	NM_001129946	CCL5	Chemokine (C-C motif) ligand 5	PPS00051A
A09	Ssc.98100	XM_003131179	CYGB	Cytoglobin-like	PPS12705A
A10	Ssc.48383	NM_001243354	DHCR24	24-dehydrocholesterol reductase	PPS07871A
A11	Ssc.35919	NM_214096	DUOX1	Dual oxidase 1	PPS00515A
A12	Ssc.33	NM_213999	DUOX2	Dual oxidase 2	PPS00402A
B01	Ssc.6058	NM_001256075	DUSP1	Dual specificity phosphatase 1	PPS06625A
B02	Ssc.8278	NM_001001641	EPHX2	Epoxide hydrolase 2, cytoplasmic	PPS01140A
B03	Ssc.33169	XM_003131642	EPX	Eosinophil peroxidase	PPS71701A
B04	Ssc.3548	XM_013995898	FHL2	Four and a half LIM domains protein 2-like	PPS10577A
B05	Ssc.1886	XM_005664081	FOXm1	Forkhead box M1	PPS04957A
B06	Ssc.42834	NM_213975	FTH1	Ferritin, heavy polypeptide 1	PPS00373A
B07	Ssc.11731	XM_003482164	GCLC	Glutamate-cysteine ligase, catalytic subunit	PPS06563A
B08	Ssc.24693	XM_001926378	GCLM	Glutamate-cysteine ligase, modifier subunit	PPS08540A
B09	Ssc.7423	NM_001177925	GLA	Alpha-galactosidase A	PPS09462A
B10	Ssc.97679	NM_214043	GP91-PHOX	NADPH oxidase heavy chain subunit	PPS00447A
B11	Ssc.6352	NM_214201	GPX1	Glutathione peroxidase 1	PPS00715A
B12	Ssc.18918	NM_001115136	GPX2	Glutathione peroxidase 2 (gastrointestinal)	PPS01543A
C01	Ssc.79705	NM_001115155	GPX3	Glutathione peroxidase 3 (plasma)	PPS00039A
C02	Ssc.93915	NM_214407	GPX4	Glutathione peroxidase 4 (phospholipid hydroperoxidase)	PPS01006A
C03	Ssc.14513	NM_213886	GPX5	Glutathione peroxidase 5 (epididymal androgen-related protein)	PPS00266A
C04	Ssc.54141	NM_001244625	GSS	Glutathione synthetase	PPS71699A
C05	Ssc.19562	NM_001243638	GSTZ1	Glutathione S-transferase zeta 1	PPS07667A
C06	Ssc.115	NM_001004027	HMOX1	Heme oxygenase (decycling) 1	PPS01191A
C07	Ssc.5145	NM_213766	HSP70.2	Heat shock protein 70.2	PPS00074A
C08	Ssc.12191	NM_213973	HSP90AA1	90-kDa heat shock protein	PPS00371A
C09	Ssc.8969	XM_003481587	KRT1	Keratin 1	PPS01717A
C10	Ssc.2457	NM_001243608	LHPP	Phospholysine phosphohistidine inorganic pyrophosphate phosphatase	PPS03608A
C11	Ssc.37828	XM_013991081	LOC100049683	Solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11	PPS01735A
C12	Ssc.26310	XM_013981114	LOC100516395	Lactoperoxidase-like	PPS11758A
D01	Ssc.19448	XM_005657567	TTN	Titin-like	PPS12973A

Position	UniGene	GenBank	Symbol	Description	Assay
D02	N/A	XM_003354346	LOC100622575	Pancreatic secretory trypsin inhibitor-like	PPS16848A
D03	Ssc.12999	XM_005660622	LOC100739163	Glutathione S-transferase P	PPS71713A
D04	Ssc.23488	XM_003483635	GSR	Glutathione-disulfide reductase	PPS00060A
D05	Ssc.71041	NM_001044570	LOC733635	Aldo-keto reductase family 1 member C2-like	PPS07939A
D06	Ssc.715	NM_214236	MB	Myoglobin	PPS00778A
D07	Ssc.15845	NM_214125	MBL2	Mannose-binding lectin (protein C) 2, soluble	PPS00563A
D08	Ssc.10955	NM_001044556	MGST3	Microsomal glutathione S-transferase 3	PPS01470A
D09	N/A	XM_003131655	MPO	Myeloperoxidase	PPS05780A
D10	N/A	XM_013989580	MPV17	MpV17 mitochondrial inner membrane protein	PPS71703A
D11	Ssc.9753	XM_003359049	MSRA	Peptide methionine sulfoxide reductase	PPS08305A
D12	Ssc.9079	NM_214056	MT-III	Metallothionein-III	PPS00462A
E01	Ssc.12159	NM_001113220	NCF1	Neutrophil cytosolic factor 1	PPS01930A
E02	Ssc.9495	NM_001123142	NCF2	Neutrophil cytosolic factor 2	PPS02028A
E03	Ssc.18384	XM_003121219	NCOA7	Nuclear receptor coactivator 7	PPS03981A
E04	Ssc.16117	NM_001143690	NOS2	Nitric oxide synthase 2, inducible	PPS00221A
E05	Ssc.46957	XM_003129745	NOX4	NADPH oxidase 4	PPS06738A
E06	N/A	XM_013993336	NOX5	NADPH oxidase, EF-hand calcium binding domain 5	PPS03615A
E07	Ssc.54065	NM_001159613	NQO1	NAD(P)H dehydrogenase, quinone 1	PPS04546A
E08	Ssc.54406	NM_001244568	NUDT1	Nudix (nucleoside diphosphate linked moiety X)-type motif 1	PPS17879A
E09	Ssc.98353	XM_003481362	OXR1	Oxidation resistance 1	PPS02704A
E10	Ssc.94482	NM_214342	OXSRI	Oxidative-stress responsive 1	PPS00921A
E11	Ssc.3996	XM_013983599	PDLIM1	PDZ and LIM domain 1	PPS03445A
E12	Ssc.5380	XM_003128042	PRDX1	Peroxioredoxin-1-like	PPS10133A
F01	Ssc.16653	NM_001244474	PRDX2	Peroxioredoxin 2	PPS10152A
F02	Ssc.1490	NM_001244531	PRDX3	Peroxioredoxin 3	PPS08578A
F03	Ssc.29335	XM_001927369	PRDX4	Peroxioredoxin 4	PPS02338A
F04	Ssc.460	NM_214144	PRDX5	Peroxioredoxin 5	PPS00600A
F05	Ssc.2979	NM_214408	PRDX6	Peroxioredoxin 6	PPS01007A
F06	Ssc.97888	NM_001008687	PRNP	Prion protein	PPS01270A
F07	Ssc.14490	NM_214385	PTGR1	Prostaglandin reductase 1	PPS00978A
F08	Ssc.1986	XM_001926129	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	PPS00849A
F09	Ssc.23994	NM_214321	PTGS2	Prostaglandin G/H synthase-2	PPS00894A
F10	Ssc.18436	NM_001245011	RNF7	Ring finger protein 7	PPS11121A
F11	N/A	XM_003359041	SCARA3	Scavenger receptor class A, member 3	PPS07848A
F12	Ssc.8479	NM_001134823	SEPP1	Selenoprotein P, plasma, 1	PPS01634A
G01	Ssc.319	NM_214110	SFTPD	Surfactant protein D	PPS00172A
G02	Ssc.6381	NM_001114271	SIRT2	Sirtuin 2	PPS01829A
G03	Ssc.12390	NM_001190422	SOD1	Superoxide dismutase 1, soluble	PPS00379A
G04	Ssc.2773	NM_001078688	SOD3	Extracellular superoxide dismutase	PPS07969A
G05	Ssc.3612	XM_003123639	SQSTM1	Sequestosome-1-like	PPS12639A
G06	N/A	XM_003121778	TRAPPC6B	Trafficking protein particle complex subunit 6B-like	PPS15405A
G07	Ssc.16092	XM_003483692	TTNLOC100620261	Titin	PPS71709A
G08	Ssc.95971	NM_214313	TXN	Thioredoxin	PPS00885A
G09	Ssc.34523	NM_214154	TXNRD1	Thioredoxin reductase 1	PPS00100A
G10	Ssc.49285	NM_001168702	TXNRD2	Thioredoxin reductase 2	PPS03816A
G11	Ssc.16350	NM_214289	UCP2	Uncoupling protein 2 (mitochondrial, proton carrier)	PPS00857B
G12	Ssc.2739	NM_001164113	VIMP	Selenoprotein S	PPS02204A
H01	Ssc.10316	XM_003124280	ACTB	Actin, beta	PPS71698A
H02	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin	PPS00376A
H03	Ssc.16135	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPS00192A
H04	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPS00668B
H05	Ssc.27927	NM_001244068	RPL13A	Ribosomal protein L13a	PPS01574A
H06	N/A	SA_00133	SGDC	Pig Genomic DNA Contamination	PPS71596A
H07	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H08	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H09	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H10	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H11	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H12	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A

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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