

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

Human Nitric Oxide Signaling Pathway

Cat. no. 330231 PAHS-062ZA

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 Human Nitric Oxide Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes whose expression is controlled by or involved in signaling by the second messenger nitric oxide (NO). Nitric oxide is a dynamic and bioreactive molecule that can both participate in and inhibit the genesis of disease. Its ability to have an impact on a wide range of physiological events stems from its capacity to reversibly alter the expression of specific genes and the activities of a wide range of proteins and signaling pathways. This array contains genes involved in nitric oxide biosynthesis, superoxide metabolism and genes involved in response to oxidative stress. Also included are genes induced by or repressed by NO, which can be used as indicator for the activation of NO pathway in your cell system. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the Nitric Oxide signaling 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	AKT1	ALOX12	APOE	ARG2	ATOX1	CAMK1	CAT	CCNA1	CCS	CDKN1A	CSDE1	CYGB
B	DDAH2	DLG4	DUOX1	DUOX2	DUSP1	DYNLL1	EGFR	EPX	FOXM1	GCH1	GCHFR	GLA
C	GLRX2	GPR156	GPX1	GPX2	GPX3	GPX4	GPX5	GPX6	GRIN2D	GSS	HSP90AB1	IL10
D	IL8	INS	JUN	KRT1	LPO	MBL2	MPO	MSRA	MT3	MTL5	MYB	NCF1
E	NCF2	NME5	NOS1	NOS1AP	NOS2	NOS3	NOX5	NQO1	NUDT1	OXR1	PNKP	PPP3CA
F	PRDX2	PRDX5	PRDX6	PREX1	PRG3	PRKAR1B	PRKCA	PRNP	RNF7	SCARA3	SCRT2	SELS
G	SEPP1	SGK2	SIRT2	SOD1	SOD2	SOD3	SRXN1	TPO	TROAP	TTN	TXNRD2	VEGFA
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.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A02	Hs.654431	NM_000697	ALOX12	Arachidonate 12-lipoxygenase
A03	Hs.654439	NM_000041	APOE	Apolipoprotein E
A04	Hs.708024	NM_001172	ARG2	Arginase, type II
A05	Hs.125213	NM_004045	ATOX1	ATX1 antioxidant protein 1 homolog (yeast)
A06	Hs.434875	NM_003656	CAMK1	Calcium/calmodulin-dependent protein kinase I
A07	Hs.502302	NM_001752	CAT	Catalase
A08	Hs.417050	NM_003914	CCNA1	Cyclin A1
A09	Hs.502917	NM_005125	CCS	Copper chaperone for superoxide dismutase
A10	Hs.370771	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
A11	Hs.69855	NM_007158	CSDE1	Cold shock domain containing E1, RNA-binding
A12	Hs.95120	NM_134268	CYGB	Cytoglobin
B01	Hs.247362	NM_013974	DDAH2	Dimethylarginine dimethylaminohydrolase 2
B02	Hs.463928	NM_001365	DLG4	Discs, large homolog 4 (Drosophila)
B03	Hs.272813	NM_175940	DUOX1	Dual oxidase 1
B04	Hs.71377	NM_014080	DUOX2	Dual oxidase 2
B05	Hs.171695	NM_004417	DUSP1	Dual specificity phosphatase 1
B06	Hs.5120	NM_003746	DYNLL1	Dynein, light chain, LC8-type 1
B07	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
B08	Hs.279259	NM_000502	EPX	Eosinophil peroxidase
B09	Hs.239	NM_021953	FOXO1	Forkhead box M1
B10	Hs.86724	NM_000161	GCH1	GTP cyclohydrolase 1
B11	Hs.631717	NM_005258	GCHFR	GTP cyclohydrolase I feedback regulator
B12	Hs.69089	NM_000169	GLA	Galactosidase, alpha
C01	Hs.458283	NM_197962	GLRX2	Glutaredoxin 2
C02	Hs.333358	NM_153002	GPR156	G protein-coupled receptor 156
C03	Hs.76686	NM_000581	GPX1	Glutathione peroxidase 1
C04	Hs.2704	NM_002083	GPX2	Glutathione peroxidase 2 (gastrointestinal)
C05	Hs.386793	NM_002084	GPX3	Glutathione peroxidase 3 (plasma)
C06	Hs.433951	NM_002085	GPX4	Glutathione peroxidase 4 (phospholipid hydroperoxidase)
C07	Hs.248129	NM_001509	GPX5	Glutathione peroxidase 5 (epididymal androgen-related protein)
C08	Hs.448570	NM_182701	GPX6	Glutathione peroxidase 6 (olfactory)
C09	Hs.445015	NM_000836	GRIN2D	Glutamate receptor, ionotropic, N-methyl D-aspartate 2D
C10	Hs.82327	NM_000178	GSS	Glutathione synthetase
C11	Hs.509736	NM_007355	HSP90AB1	Heat shock protein 90kDa alpha (cytosolic), class B member 1
C12	Hs.193717	NM_000572	IL10	Interleukin 10
D01	Hs.624	NM_000584	IL8	Interleukin 8
D02	Hs.654579	NM_000207	INS	Insulin
D03	Hs.714791	NM_002228	JUN	Jun proto-oncogene
D04	Hs.80828	NM_006121	KRT1	Keratin 1
D05	Hs.234742	NM_006151	LPO	Lactoperoxidase
D06	Hs.499674	NM_000242	MBL2	Mannose-binding lectin (protein C) 2, soluble
D07	Hs.458272	NM_000250	MPO	Myeloperoxidase
D08	Hs.490981	NM_012331	MSRA	Methionine sulfoxide reductase A
D09	Hs.73133	NM_005954	MT3	Metallothionein 3

Position	UniGene	GenBank	Symbol	Description
D10	Hs.145932	NM_004923	MTL5	Metallothionein-like 5, testis-specific (tesmin)
D11	Hs.654446	NM_005375	MYB	V-myb myeloblastosis viral oncogene homolog (avian)
D12	Hs.647047	NM_000265	NCF1	Neutrophil cytosolic factor 1
E01	Hs.587558	NM_000433	NCF2	Neutrophil cytosolic factor 2
E02	Hs.715767	NM_003551	NME5	Non-metastatic cells 5, protein expressed in (nucleoside-diphosphate kinase)
E03	Hs.654410	NM_000620	NOS1	Nitric oxide synthase 1 (neuronal)
E04	Hs.655000	NM_014697	NOS1AP	Nitric oxide synthase 1 (neuronal) adaptor protein
E05	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
E06	Hs.707978	NM_000603	NOS3	Nitric oxide synthase 3 (endothelial cell)
E07	Hs.657932	NM_024505	NOX5	NADPH oxidase, EF-hand calcium binding domain 5
E08	Hs.406515	NM_000903	NQO1	NAD(P)H dehydrogenase, quinone 1
E09	Hs.534331	NM_002452	NUDT1	Nudix (nucleoside diphosphate linked moiety X)-type motif 1
E10	Hs.148778	NM_181354	OXR1	Oxidation resistance 1
E11	Hs.78016	NM_007254	PNKP	Polynucleotide kinase 3'-phosphatase
E12	Hs.435512	NM_000944	PPP3CA	Protein phosphatase 3, catalytic subunit, alpha isozyme
F01	Hs.432121	NM_005809	PRDX2	Peroxiredoxin 2
F02	Hs.502823	NM_181652	PRDX5	Peroxiredoxin 5
F03	Hs.120	NM_004905	PRDX6	Peroxiredoxin 6
F04	Hs.153310	NM_020820	PREX1	Phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 1
F05	Hs.251386	NM_006093	PRG3	Proteoglycan 3
F06	Hs.520851	NM_002735	PRKAR1B	Protein kinase, cAMP-dependent, regulatory, type I, beta
F07	Hs.531704	NM_002737	PRKCA	Protein kinase C, alpha
F08	Hs.472010	NM_183079	PRNP	Prion protein
F09	Hs.134623	NM_014245	RNF7	Ring finger protein 7
F10	Hs.128856	NM_182826	SCARA3	Scavenger receptor class A, member 3
F11	Hs.355284	NM_033129	SCRT2	Scratch homolog 2, zinc finger protein (Drosophila)
F12	Hs.32148	NM_203472	SELS	Selenoprotein S
G01	Hs.275775	NM_005410	SEPP1	Selenoprotein P, plasma, 1
G02	Hs.472793	NM_016276	SGK2	Serum/glucocorticoid regulated kinase 2
G03	Hs.466693	NM_012237	SIRT2	Sirtuin 2
G04	Hs.443914	NM_000454	SOD1	Superoxide dismutase 1, soluble
G05	Hs.487046	NM_000636	SOD2	Superoxide dismutase 2, mitochondrial
G06	Hs.2420	NM_003102	SOD3	Superoxide dismutase 3, extracellular
G07	Hs.516830	NM_080725	SRXN1	Sulfiredoxin 1
G08	Hs.467554	NM_000547	TPO	Thyroid peroxidase
G09	Hs.524399	NM_005480	TROAP	Trophinin associated protein (tastin)
G10	Hs.134602	NM_003319	TTN	Titin
G11	Hs.443430	NM_006440	TXNRD2	Thioredoxin reductase 2
G12	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
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.
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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