

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

Mouse Nitric Oxide Signaling Pathway

Cat. no. 330231 PAMM-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 Mouse 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	Aass	Als2	ApoE	Bax	Bcl2l1	Calm1	Capns1	Cat	Cav1	Ccnd1	Ccng1	Ccs
B	Cd151	Cdkn1a	Clcf1	Ctsb	Cyba	Ddah1	Ddah2	Dlg4	Dynl1	Egr1	Epx	Ercc2
C	Fas	Fos	Gab1	Gadd45a	Gpx1	Gpx2	Gpx3	Gpx4	Gpx5	Gpx6	Gpx7	Grin1
D	Hmgb1	Hpn	Idh1	Irgm1	Mdm2	Med4	Mpo	Myc	Ncf2	Nedd1	Nos1	Nos2
E	Nos3	Nox1	Nox4	Noxa1	Noxo1	Nudt15	Pea15a	Ppp1r15b	Ppp3ca	Prdx1	Prdx2	Prdx6
F	Prkaca	Prmp	Prpf4	Psmb5	Ptx3	Rb1	Recql4	Rprm	Rras	Rrp1	Scd1	Scd2
G	Scd3	Sfn	Sod1	Sod2	Sod3	Tpo	Trp53	Txnip	Txnrd2	Ubc	Ucp3	Xpa
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.18651	NM_013930	Aass	Aminoadipate-semialdehyde synthase
A02	Mm.272078	NM_028717	Als2	Amyotrophic lateral sclerosis 2 (juvenile) homolog (human)
A03	Mm.305152	NM_009696	ApoE	Apolipoprotein E
A04	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A05	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A06	Mm.285993	NM_009790	Calm1	Calmodulin 1
A07	Mm.439782	NM_009795	Capns1	Calpain, small subunit 1
A08	Mm.4215	NM_009804	Cat	Catalase
A09	Mm.28278	NM_007616	Cav1	Caveolin 1, caveolae protein
A10	Mm.273049	NM_007631	Ccnd1	Cyclin D1
A11	Mm.2103	NM_009831	Ccng1	Cyclin G1
A12	Mm.434411	NM_016892	Ccs	Copper chaperone for superoxide dismutase
B01	Mm.30246	NM_009842	Cd151	CD151 antigen
B02	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B03	Mm.347919	NM_019952	Clcf1	Cardiotrophin-like cytokine factor 1
B04	Mm.236553	NM_007798	Ctsb	Cathepsin B
B05	Mm.271671	NM_007806	Cyba	Cytochrome b-245, alpha polypeptide
B06	Mm.234247	NM_026993	Ddah1	Dimethylarginine dimethylaminohydrolase 1
B07	Mm.1457	NM_016765	Ddah2	Dimethylarginine dimethylaminohydrolase 2
B08	Mm.27256	NM_007864	Dlg4	Discs, large homolog 4 (Drosophila)
B09	Mm.256858	NM_019682	Dynl1	Dynein light chain LC8-type 1
B10	Mm.181959	NM_007913	Egr1	Early growth response 1
B11	Mm.1315	NM_007946	Epx	Eosinophil peroxidase
B12	Mm.36524	NM_007949	Ercc2	Excision repair cross-complementing rodent repair deficiency, complementation group 2
C01	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
C02	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C03	Mm.277409	NM_021356	Gab1	Growth factor receptor bound protein 2-associated protein 1
C04	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha
C05	Mm.1090	NM_008160	Gpx1	Glutathione peroxidase 1
C06	Mm.441856	NM_030677	Gpx2	Glutathione peroxidase 2
C07	Mm.200916	NM_008161	Gpx3	Glutathione peroxidase 3
C08	Mm.359573	NM_008162	Gpx4	Glutathione peroxidase 4
C09	Mm.1332	NM_010343	Gpx5	Glutathione peroxidase 5
C10	Mm.46195	NM_145451	Gpx6	Glutathione peroxidase 6
C11	Mm.20164	NM_024198	Gpx7	Glutathione peroxidase 7
C12	Mm.278672	NM_008169	Grin1	Glutamate receptor, ionotropic, NMDA1 (zeta 1)
D01	Mm.313345	NM_010439	Hmgb1	High mobility group box 1
D02	Mm.19182	NM_008281	Hpn	Hepsin
D03	Mm.9925	NM_010497	Idh1	Isocitrate dehydrogenase 1 (NADP+), soluble
D04	Mm.29938	NM_008326	Irgm1	Immunity-related GTPase family M member 1
D05	Mm.22670	NM_010786	Mdm2	Transformed mouse 3T3 cell double minute 2
D06	Mm.282888	NM_026119	Med4	Mediator of RNA polymerase II transcription, subunit 4 homolog (yeast)
D07	Mm.4668	NM_010824	Mpo	Myeloperoxidase
D08	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene

Position	UniGene	GenBank	Symbol	Description
D09	Mm.270307	NM_010877	Ncf2	Neutrophil cytosolic factor 2
D10	Mm.2998	NM_008682	Nedd1	Neural precursor cell expressed, developmentally down-regulated gene 1
D11	Mm.44249	NM_008712	Nos1	Nitric oxide synthase 1, neuronal
D12	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
E01	Mm.258415	NM_008713	Nos3	Nitric oxide synthase 3, endothelial cell
E02	Mm.233865	NM_172203	Nox1	NADPH oxidase 1
E03	Mm.31748	NM_015760	Nox4	NADPH oxidase 4
E04	Mm.218774	NM_172204	Noxa1	NADPH oxidase activator 1
E05	Mm.390971	NM_027988	Noxo1	NADPH oxidase organizer 1
E06	Mm.386852	NM_172527	Nudt15	Nudix (nucleoside diphosphate linked moiety X)-type motif 15
E07	Mm.544	NM_011063	Pea15a	Phosphoprotein enriched in astrocytes 15A
E08	Mm.293628	NM_133819	Ppp1r15b	Protein phosphatase 1, regulatory (inhibitor) subunit 15b
E09	Mm.331389	NM_008913	Ppp3ca	Protein phosphatase 3, catalytic subunit, alpha isoform
E10	Mm.30929	NM_011034	Prdx1	Peroxiredoxin 1
E11	Mm.347009	NM_011563	Prdx2	Peroxiredoxin 2
E12	Mm.186185	NM_007453	Prdx6	Peroxiredoxin 6
F01	Mm.19111	NM_008854	Prkaca	Protein kinase, cAMP dependent, catalytic, alpha
F02	Mm.648	NM_011170	Prnp	Prion protein
F03	Mm.30660	NM_027297	Prpf4	PRP4 pre-mRNA processing factor 4 homolog (yeast)
F04	Mm.8911	NM_011186	Psmb5	Proteasome (prosome, macropain) subunit, beta type 5
F05	Mm.276776	NM_008987	Ptx3	Pentraxin related gene
F06	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F07	Mm.18373	NM_058214	Recql4	RecQ protein-like 4
F08	Mm.27086	NM_023396	Rprm	Reprimo, TP53 dependent G2 arrest mediator candidate
F09	Mm.389894	NM_009101	Rras	Harvey rat sarcoma oncogene, subgroup R
F10	Mm.38344	NM_010925	Rrp1	Ribosomal RNA processing 1 homolog (S. cerevisiae)
F11	Mm.267377	NM_009127	Scd1	Stearoyl-Coenzyme A desaturase 1
F12	Mm.485035	NM_009128	Scd2	Stearoyl-Coenzyme A desaturase 2
G01	Mm.480594	NM_024450	Scd3	Stearoyl-coenzyme A desaturase 3
G02	Mm.44482	NM_018754	Sfn	Stratifin
G03	Mm.276325	NM_011434	Sod1	Superoxide dismutase 1, soluble
G04	Mm.290876	NM_013671	Sod2	Superoxide dismutase 2, mitochondrial
G05	Mm.2407	NM_011435	Sod3	Superoxide dismutase 3, extracellular
G06	Mm.4991	NM_009417	Tpo	Thyroid peroxidase
G07	Mm.222	NM_011640	Trp53	Transformation related protein 53
G08	Mm.410189	NM_023719	Txnip	Thioredoxin interacting protein
G09	Mm.390906	NM_013711	Txnrd2	Thioredoxin reductase 2
G10	Mm.331	NM_019639	Ubc	Ubiquitin C
G11	Mm.6254	NM_009464	Ucp3	Uncoupling protein 3 (mitochondrial, proton carrier)
G12	Mm.247036	NM_011728	Xpa	Xeroderma pigmentosum, complementation group A
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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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