RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Nitric Oxide Signaling Pathway

Cat. no. 330231 PARN-062ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat 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 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.

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	Rn.198671	NM_001100963	Aass	Aminoadipate-semialdehyde synthase
A02	Rn.6408	NM_001013413	Als2	Amyotrophic lateral sclerosis 2 (juvenile) homolog (human)
A03	Rn.32351	NM_138828	Apoe	Apolipoprotein E
A04	Rn.10668	NM_017059	Bax	Bcl2-associated X protein
A05	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A06	Rn.4166	NM_031969	Calm1	Calmodulin 1
A07	Rn.3430	NM_017118	Capns1	Calpain, small subunit 1
A08	Rn.3001	NM_012520	Cat	Catalase
A09	Rn.22518	NM_031556	Cav1	Caveolin 1, caveolae protein
A10	Rn.22279	NM_171992	Ccnd1	Cyclin D1
A11	Rn.5834	NM_012923	Ccng1	Cyclin G1
A12	Rn.12311	NM_053425	Ccs	Copper chaperone for superoxide dismutase
B01	Rn.1465	NM_022523	Cd151	CD151 molecule (Raph blood group)
B02	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
B03	Rn.130193	NM_207615	Clcf1	Cardiotrophin-like cytokine factor 1
B04	Rn.100909	NM_022597	Ctsb	Cathepsin B
B05	Rn.5856	NM_024160	Cyba	Cytochrome b-245, alpha polypeptide
B06	Rn.7398	NM_022297	Ddah1	Dimethylarginine dimethylaminohydrolase 1
B07	Rn.203056	NM_212532	Ddah2	Dimethylarginine dimethylaminohydrolase 2
B08	Rn.9765	NM_019621	Dlg4	Discs, large homolog 4 (Drosophila)
B09	Rn.35769	NM_053319	Dynll1	Dynein light chain LC8-type 1
B10	Rn.9096	NM_012551	Egr1	Early growth response 1
B11	Rn.17695	NM_001107037	Epx	Eosinophil peroxidase
B12	Rn.74906	NM_001172809	Ercc2	Excision repair cross-complementing rodent repair deficiency, complementation group 2
C01	Rn.162521	NM_139194	Fas	Fas (TNF receptor superfamily, member 6)
C02	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C03	Rn.1725	NM_001108444	Gab1	GRB2-associated binding protein 1
C04	Rn.10250	NM_024127	Gadd45a	Growth arrest and DNA-damage-inducible, alpha
C05	Rn.11323	NM_030826	Gpx1	Glutathione peroxidase 1
C06	Rn.3503	NM_183403	Gpx2	Glutathione peroxidase 2
C07	Rn.108074	NM_022525	Gpx3	Glutathione peroxidase 3
C08	Rn.3647	NM_017165	Gpx4	Glutathione peroxidase 4
C09	Rn.218434	NM_001105738	Gpx5	Glutathione peroxidase 5
C10	Rn.9852	NM_147165	Gpx6	Glutathione peroxidase 6
C11	Rn.4130	NM_001106673	Gpx7	Glutathione peroxidase 7
C12	Rn.9840	NM_017010	Grin1	Glutamate receptor, ionotropic, N-methyl D-aspartate 1
D01	Rn.4121	NM_012963	Hmgb1	High mobility group box 1
D02	Rn.11139	NM_017112	Hpn	Hepsin
D03	Rn.3561	NM_031510	Idh1	Isocitrate dehydrogenase 1 (NADP+), soluble
D04	Rn.20356	NM_001012007	Irgm	Immunity-related GTPase family, M
D05	Rn.91829	NM_001108099	Mdm2	Mdm2 p53 binding protein homolog (mouse)
D06	Rn.114469	NM_001024256	Med4	Mediator complex subunit 4
D07	Rn.47782	NM_001107036	Mpo	Myeloperoxidase
D08	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
D09	Rn.162331	NM_001100984	Ncf2	Neutrophil cytosolic factor 2
D10	Rn.23035	NM_001106779	Nedd1	Neural precursor cell expressed, developmentally down-regulated 1
D11	Rn.10573	NM_052799	Nos1	Nitric oxide synthase 1, neuronal
D12	Rn.9903	NM_138922	Nos1ap	Nitric oxide synthase 1 (neuronal) adaptor protein
E01	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
E02	Rn.44265	NM_021838	Nos3	Nitric oxide synthase 3, endothelial cell
E03	Rn.220465	NM_053683	Nox1	NADPH oxidase 1
E04	Rn.14744	NM_053524	Nox4	NADPH oxidase 4
E05	Rn.162651	NM_001100171	Noxa1	NADPH oxidase activator 1
E06	Rn.137764	NM_001106986	Noxo1	NADPH oxidase organizer 1
E07	Rn.11234	NM_017000	Nqo1	NAD(P)H dehydrogenase, quinone 1
E08	Rn.144747	NM_001106049	Nudt15	Nudix (nucleoside diphosphate linked moiety X)-type motif 15

Position	UniGene	GenBank	Symbol	Description
E09	Rn.155339	NM_001013231	Pea15a	Phosphoprotein enriched in astrocytes 15A
E10	Rn.78049	NM_001107175	Ppp1r15b	Protein phosphatase 1, regulatory (inhibitor) subunit 15b
E11	Rn.6866	NM_017041	Ppp3ca	Protein phosphatase 3, catalytic subunit, alpha isoform
E12	Rn.2845	NM_057114	Prdx1	Peroxiredoxin 1
F01	Rn.2511	NM_017169	Prdx2	Peroxiredoxin 2
F02	Rn.42	NM_053576	Prdx6	Peroxiredoxin 6
F03	Rn.20	NM_001100922	Prkaca	Protein kinase, cAMP-dependent, catalytic, alpha
F04	Rn.3936	NM_012631	Prnp	Prion protein
F05	Rn.162812	NM_001106659	Prpf4	PRP4 pre-mRNA processing factor 4 homolog (yeast)
F06	Rn.2	NM_001105727	Psmb5	Proteasome (prosome, macropain) subunit, beta type 5
F07	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
F08	Rn.161988	NM_001130494	Recql4	RecQ protein-like 4
F09	Rn.45197	NM_001044276	Rprm	Reprimo, TP53 dependent G2 arrest mediator candidate
F10	Rn.71224	NM_001108481	Rras	Harvey rat sarcoma virus oncogene, subgroup R
F11	Rn.104084	NM_001012073	Rrp1	Ribosomal RNA processing 1 homolog (S. cerevisiae)
F12	Rn.83595	NM_031841	Scd	Stearoyl-CoA desaturase (delta-9-desaturase)
G01	Rn.1023	NM_139192	Scd1	Stearoyl-Coenzyme A desaturase 1
G02	Rn.159862	XM_001057317	Scd4	Stearoyl-coenzyme A desaturase 4
G03	Rn.145079	XM_232745	Sfn	Stratifin
G04	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G05	Rn.10488	NM_017051	Sod2	Superoxide dismutase 2, mitochondrial
G06	Rn.10358	NM_012880	Sod3	Superoxide dismutase 3, extracellular
G07	Rn.54443	NM_030989	Tp53	Tumor protein p53
G08	Rn.91199	NM_019353	Tpo	Thyroid peroxidase
G09	Rn.2758	NM_001008767	Txnip	Thioredoxin interacting protein
G10	Rn.6300	NM_022584	Txnrd2	Thioredoxin reductase 2
G11	Rn.3761	NM_017314	Ubc	Ubiquitin C
G12	Rn.9902	NM_013167	Ucp3	Uncoupling protein 3 (mitochondrial, proton carrier)
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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 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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