

RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Multiple Sclerosis

Cat. no. 330231 PAMM-125ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Mouse Multiple Sclerosis RT² Profiler PCR Array profiles the expression of 84 key genes involved in multiple sclerosis (MS) progression. MS, an autoimmune disease of the central nervous system, progressively destroys axonal myelin sheaths and oligodendrocytes. Symptoms primarily result from the loss of myelin and accompanying inflammation. This disease typically progresses with acute attacks (relapses) characterized by T cell invasion and inflammation that form white matter lesions, with a period of remission where neuronal cells can recover. One central focus of MS research uses microarray analyses of white matter lesions from postmortem patients to identify novel genes explaining MS mechanisms and potentially yield new therapeutic targets. This array includes genes mediating MS progression, such as cytokines and chemokines or inflammatory and immune response genes, as well as genes whose expression changes correlate across multiple microarray expression analyses, potentially identifying novel cellular functions involved in this disease such as cell adhesion, cellular stress, and apoptosis. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in multiple sclerosis with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

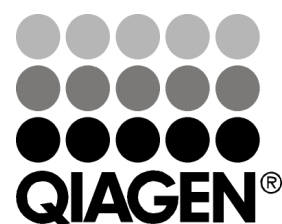
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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.



Sample & Assay Technologies

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	Mm.1408	NM_009627	Adm	Adrenomedullin
A02	Mm.148007	NM_026270	Akt1s1	AKT1 substrate 1 (proline-rich)
A03	Mm.384171	NM_007462	Apc	Adenomatosis polyposis coli
A04	Mm.277585	NM_007471	App	Amyloid beta (A4) precursor protein
A05	Mm.293574	NM_023113	Aspa	Aspartoacylase
A06	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A07	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A08	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A09	Mm.219527	NM_144938	C1s	Complement component 1, s subcomponent
A10	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A11	Mm.1282	NM_011337	Ccl3	Chemokine (C-C motif) ligand 3
A12	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B01	Mm.341574	NM_013654	Ccl7	Chemokine (C-C motif) ligand 7
B02	Mm.274927	NM_009912	Ccr1	Chemokine (C-C motif) receptor 1
B03	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
B04	Mm.255003	NM_007642	Cd28	CD28 antigen
B05	Mm.2209	NM_013488	Cd4	CD4 antigen
B06	Mm.271833	NM_011611	Cd40	CD40 antigen
B07	Mm.423621	NM_009851	Cd44	CD44 antigen
B08	Mm.210676	NM_007657	Cd9	CD9 antigen
B09	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B10	Mm.877	NM_021274	Cxcl10	Chemokine (C-X-C motif) ligand 10
B11	Mm.131723	NM_019494	Cxcl11	Chemokine (C-X-C motif) ligand 11
B12	Mm.766	NM_008599	Cxcl9	Chemokine (C-X-C motif) ligand 9
C01	Mm.12876	NM_009910	Cxcr3	Chemokine (C-X-C motif) receptor 3
C02	Mm.28979	NM_181594	Edc4	Enhancer of mRNA decapping 4
C03	Mm.283168	NM_010332	Ednra	Endothelin receptor type A
C04	Mm.181959	NM_007913	Egr1	Early growth response 1
C05	Mm.133330	NM_023580	Epha1	Eph receptor A1
C06	Mm.373043	NM_010153	ErbB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C07	Mm.277812	NM_009510	Ezr	Ezrin
C08	Mm.3355	NM_010177	FasL	Fas ligand (TNF superfamily, member 6)
C09	Mm.193099	NM_010233	Fn1	Fibronectin 1
C10	Mm.182291	NM_054039	Foxp3	Forkhead box P3
C11	Mm.1239	NM_010277	Gfap	Glial fibrillary acidic protein
C12	Mm.196464	NM_008138	Gnai2	Guanine nucleotide binding protein (G protein), alpha inhibiting 2
D01	Mm.1090	NM_008160	Gpx1	Glutathione peroxidase 1
D02	Mm.439649	NM_008163	Grb2	Growth factor receptor bound protein 2
D03	Mm.22564	NM_010382	H2-Eb1	Histocompatibility 2, class II antigen E beta
D04	Mm.202504	NM_008228	Hdac1	Histone deacetylase 1
D05	Mm.27816	NM_010422	Hexb	Hexosaminidase B
D06	Mm.3879	NM_010431	Hif1a	Hypoxia inducible factor 1, alpha subunit
D07	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
D08	Mm.240327	NM_008337	Ifng	Interferon gamma
D09	Mm.874	NM_010548	Il10	Interleukin 10
D10	Mm.1284	NM_008355	Il13	Interleukin 13
D11	Mm.1410	NM_008360	Il18	Interleukin 18
D12	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
E01	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
E02	Mm.1019	NM_031168	Il6	Interleukin 6
E03	Mm.4364	NM_010560	Il6st	Interleukin 6 signal transducer
E04	Mm.1137	NM_008404	Itgb2	Integrin beta 2
E05	Mm.289657	NM_146145	Jak1	Janus kinase 1
E06	Mm.275839	NM_008413	Jak2	Janus kinase 2
E07	Mm.275071	NM_010591	Jun	Jun oncogene
E08	Mm.87787	NM_010735	Lta	Lymphotoxin A
E09	Mm.241355	NM_010758	Mag	Myelin-associated glycoprotein

Position	UniGene	GenBank	Symbol	Description
E10	Mm.39040	NM_010762	Mal	Myelin and lymphocyte protein, T-cell differentiation protein
E11	Mm.248907	NM_008927	Map2k1	Mitogen-activated protein kinase kinase 1
E12	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
F01	Mm.252063	NM_010777	Mbp	Myelin basic protein
F02	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
F03	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
F04	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
F05	Mm.439653	NM_010151	Nr2f1	Nuclear receptor subfamily 2, group F, member 1
F06	Mm.267570	NM_008742	Nrf3	Neurotrophin 3
F07	Mm.16898	NM_016966	Phgdh	3-phosphoglycerate dehydrogenase
F08	Mm.1268	NM_011123	Plp1	Proteolipid protein (myelin) 1
F09	Mm.1237	NM_008885	Pmp22	Peripheral myelin protein 22
F10	Mm.8681	NM_011202	Ptpn11	Protein tyrosine phosphatase, non-receptor type 11
F11	Mm.184163	NM_029780	Raf1	V-raf-leukemia viral oncogene 1
F12	Mm.270975	NM_011241	Rangap1	RAN GTPase activating protein 1
G01	Mm.276325	NM_011434	Sod1	Superoxide dismutase 1, soluble
G02	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G03	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G04	Mm.18213	NM_009367	Tgfb2	Transforming growth factor, beta 2
G05	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G06	Mm.1258	NM_011609	Tnfrsf1a	Tumor necrosis factor receptor superfamily, member 1a
G07	Mm.235328	NM_011610	Tnfrsf1b	Tumor necrosis factor receptor superfamily, member 1b
G08	Mm.217233	NM_009408	Top1	Topoisomerase (DNA) I
G09	Mm.7420	NM_009451	Tubb4	Tubulin, beta 4
G10	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G11	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G12	Mm.332314	NM_011738	Ywhah	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eta polypeptide
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 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.

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