

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

Mouse Multiple Sclerosis

Cat. no. 330231 PAMM-125ZA

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 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 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	Adm	Akt1s1	Apc	App	Aspa	Bax	Bcl2	Bcl2l1	C1s	Ccl12	Ccl3	Ccl5
B	Ccl7	Ccr1	Ccr5	Cd28	Cd4	Cd40	Cd44	Cd9	Csf1	Cxcl10	Cxcl11	Cxcl9
C	Cxcr3	Edc4	Ednra	Egr1	Epha1	ErbB3	Ezr	FasL	Fn1	Foxp3	Gfap	Gnai2
D	Gpx1	Grb2	H2-Eb1	Hdac1	Hexb	Hif1a	Icam1	Ifng	Il10	Il13	Il18	Il1b
E	Il2ra	Il6	Il6st	Ilgb2	Jak1	Jak2	Jun	Lta	Mag	Mal	Map2k1	Mapk1
F	Mbp	Mmp9	Myc	Nfkb1	Nr2f1	Nrf3	Phgdh	Plp1	Pmp22	Plpn11	Raf1	Rangap1
G	Sod1	Stat3	Tgfb1	Tgfb2	Tnf	Tnfrsf1a	Tnfrsf1b	Top1	Tubb4	Vcam1	Vegfa	Ywhah
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.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	Cd5	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

Position	UniGene	GenBank	Symbol	Description
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
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	Ntf3	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 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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