RT² Profiler PCR Array (Rotor-Gene® Format)

Human Multiple Sclerosis

Cat. no. 330231 PAHS-125ZR

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 Human 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

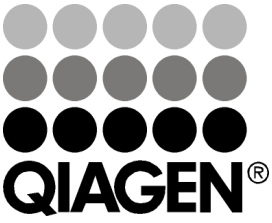
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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.



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	Hs.441047	NM_001124	ADM	Adrenomedullin
A02	Hs.515542	NM_032375	AKT1S1	AKT1 substrate 1 (proline-rich)
A03	Hs.158932	NM_000038	APC	Adenomatous polyposis coli
A04	Hs.434980	NM_000484	APP	Amyloid beta (A4) precursor protein
A05	Hs.171142	NM_000049	ASPA	Aspartoacylase
A06	Hs.624291	NM_004324	BAX	BCL2-associated X protein
A07	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A08	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A09	Hs.458355	NM_001734	C1S	Complement component 1, s subcomponent
A10	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A11	Hs.514107	NM_002983	CCL3	Chemokine (C-C motif) ligand 3
A12	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B01	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
B02	Hs.301921	NM_001295	CCR1	Chemokine (C-C motif) receptor 1
B03	Hs.450802	NM_000579	CCR5	Chemokine (C-C motif) receptor 5
B04	Hs.591629	NM_006139	CD28	CD28 molecule
B05	Hs.631659	NM_000616	CD4	CD4 molecule
B06	Hs.472860	NM_001250	CD40	CD40 molecule, TNF receptor superfamily member 5
B07	Hs.502328	NM_000610	CD44	CD44 molecule (Indian blood group)
B08	Hs.114286	NM_001769	CD9	CD9 molecule
B09	Hs.591402	NM_000757	CSF1	Colony stimulating factor 1 (macrophage)
B10	Hs.632586	NM_001565	CXCL10	Chemokine (C-X-C motif) ligand 10
B11	Hs.632592	NM_005409	CXCL11	Chemokine (C-X-C motif) ligand 11
B12	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
C01	Hs.198252	NM_001504	CXCR3	Chemokine (C-X-C motif) receptor 3
C02	Hs.75682	NM_014329	EDC4	Enhancer of mRNA decapping 4
C03	Hs.183713	NM_001957	EDNRA	Endothelin receptor type A
C04	Hs.326035	NM_001964	EGR1	Early growth response 1
C05	Hs.89839	NM_005232	EPHA1	EPH receptor A1
C06	Hs.118681	NM_001982	ERBB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C07	Hs.487027	NM_003379	EZR	Ezrin
C08	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
C09	Hs.203717	NM_002026	FN1	Fibronectin 1
C10	Hs.247700	NM_014009	FOXP3	Forkhead box P3
C11	Hs.514227	NM_002055	GFAP	Glial fibrillary acidic protein
C12	Hs.77269	NM_002070	GNAI2	Guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
D01	Hs.76686	NM_000581	GPX1	Glutathione peroxidase 1
D02	Hs.444356	NM_002086	GRB2	Growth factor receptor-bound protein 2
D03	Hs.88556	NM_004964	HDAC1	Histone deacetylase 1
D04	Hs.69293	NM_000521	HEXB	Hexosaminidase B (beta polypeptide)
D05	Hs.597216	NM_001530	HIF1A	Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D06	Hs.701691	NM_002124	HLA-DRB1	Major histocompatibility complex, class II, DR beta 1
D07	Hs.643447	NM_000201	ICAM1	Intercellular adhesion molecule 1
D08	Hs.856	NM_000619	IFNG	Interferon, gamma
D09	Hs.193717	NM_000572	IL10	Interleukin 10
D10	Hs.845	NM_002188	IL13	Interleukin 13
D11	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
D12	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
E01	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
E02	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
E03	Hs.532082	NM_002184	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
E04	Hs.375957	NM_000211	ITGB2	Integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)
E05	Hs.207538	NM_002227	JAK1	Janus kinase 1
E06	Hs.656213	NM_004972	JAK2	Janus kinase 2
E07	Hs.714791	NM_002228	JUN	Jun proto-oncogene

Position	UniGene	GenBank	Symbol	Description
E08	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
E09	Hs.643440	NM_002361	MAG	Myelin associated glycoprotein
E10	Hs.80395	NM_002371	MAL	Mal, T-cell differentiation protein
E11	Hs.145442	NM_002755	MAP2K1	Mitogen-activated protein kinase kinase 1
E12	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
F01	Hs.551713	NM_002385	MBP	Myelin basic protein
F02	Hs.297413	NM_004994	MMP9	Matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F03	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
F04	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F05	Hs.519445	NM_005654	NR2F1	Nuclear receptor subfamily 2, group F, member 1
F06	Hs.99171	NM_002527	NTF3	Neurotrophin 3
F07	Hs.487296	NM_006623	PHGDH	Phosphoglycerate dehydrogenase
F08	Hs.1787	NM_000533	PLP1	Proteolipid protein 1
F09	Hs.372031	NM_000304	PMP22	Peripheral myelin protein 22
F10	Hs.506852	NM_002834	PTPN11	Protein tyrosine phosphatase, non-receptor type 11
F11	Hs.159130	NM_002880	RAF1	V-raf-1 murine leukemia viral oncogene homolog 1
F12	Hs.183800	NM_002883	RANGAP1	Ran GTPase activating protein 1
G01	Hs.443914	NM_000454	SOD1	Superoxide dismutase 1, soluble
G02	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G03	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
G04	Hs.133379	NM_003238	TGFB2	Transforming growth factor, beta 2
G05	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G06	Hs.279594	NM_001065	TNFRSF1A	Tumor necrosis factor receptor superfamily, member 1A
G07	Hs.256278	NM_001066	TNFRSF1B	Tumor necrosis factor receptor superfamily, member 1B
G08	Hs.472737	NM_003286	TOP1	Topoisomerase (DNA) I
G09	Hs.110837	NM_006087	TUBB4	Tubulin, beta 4
G10	Hs.109225	NM_001078	VCAM1	Vascular cell adhesion molecule 1
G11	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G12	Hs.226755	NM_003405	YWHAH	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eta polypeptide
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.
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.

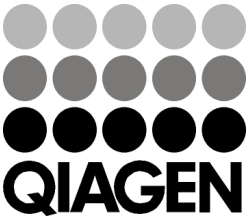
RT² Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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.

Trademarks: QIAGEN®, Rotor-Gene®, Rotor-Disc™ (QIAGEN Group); ROX™ (Applera Corporation or its subsidiaries); SYBR® (Molecular Probes, Inc.).
1067688 03/2011 © 2011 QIAGEN, all rights reserved.

www.qiagen.com

Australia ▪ 1-800-243-800
Austria ▪ 0800/281010
Belgium ▪ 0800-79612
Brazil ▪ 0800-557779
Canada ▪ 800-572-9613
China ▪ 8621-3865-3865
Denmark ▪ 80-885945
Finland ▪ 0800-914416
France ▪ 01-60-920-930
Germany ▪ 02103-29-12000
Hong Kong ▪ 800 933 965
Ireland ▪ 1800 555 049
Italy ▪ 800-787980
Japan ▪ 03-6890-7300
Korea (South) ▪ 080-000-7145
Luxembourg ▪ 8002 2076
Mexico ▪ 01-800-7742-436
The Netherlands ▪ 0800 0229592
Norway ▪ 800-18859
Singapore ▪ 1800-742-4368
Spain ▪ 91-630-7050
Sweden ▪ 020-790282
Switzerland ▪ 055-254-22-11
UK ▪ 01293-422-911
USA ▪ 800-426-8157



Sample & Assay Technologies