

# RT<sup>2</sup> Profiler PCR Array (Rotor-Gene® Format)

## Mouse Phagocytosis

Cat. no. 330231 PAMM-173ZR

For pathway expression analysis

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

### Description

The Mouse Phagocytosis RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes involved in phagocytosis – the process by which macrophages, dendritic cells, and other myeloid phagocytes internalize diverse particulate targets. In some cases, the innate immune cells take up and destroy pathogenic bacteria, apoptotic cells, and other large particles. In other cases, the peptide antigens from these particles are preserved for presentation in association with major histocompatibility complex (MHC) class I or class II molecules to stimulate antigen-specific T cells which destroy them. The molecular and cellular events that underlie the binding of targets to a phagocyte and their engulfment into phagosomes and processing in the phagosome have been extensively studied. The process of phagocytosis, in either case, provides information to myeloid phagocytes about the nature of the targets being engulfed and helps to tailor immune responses. The genes profiled with this array include receptors involved in phagocytosis, recognition and engulfment of particulate target, phagosome maturation, and signal transduction, as well as cytokines and chemokines to characterize the phagocytic process in a model system. A set of controls present on each array enables data analysis using the  $\Delta\Delta CT$  method of relative quantification and assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in phagocytosis with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

### Shipping and storage

RT<sup>2</sup> 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  $-20^{\circ}\text{C}$ .

**Note:** Ensure that you have the correct RT<sup>2</sup> 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: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.3969	NM_009605	Adipoq	Adiponectin, C1Q and collagen domain containing
A02	Mm.3383	NM_007425	Ager	Advanced glycosylation end product-specific receptor
A03	Mm.248360	NM_010730	Anxa1	Annexin A1
A04	Mm.4128	NM_009465	Axl	AXL receptor tyrosine kinase
A05	Mm.19131	NM_009778	C3	Complement component 3
A06	Mm.467043	NM_007591	Calr	Calreticulin
A07	Mm.3460	NM_009841	Cd14	CD14 antigen
A08	Mm.406799	NM_007643	Cd36	CD36 antigen
A09	Mm.423621	NM_009851	Cd44	CD44 antigen
A10	Mm.390865	NM_010581	Cd47	CD47 antigen (Rh-related antigen, integrin-associated signal transducer)
A11	Mm.486145	NM_054059	Ceacam3	Carcinoembryonic antigen-related cell adhesion molecule 3
A12	Mm.239516	NM_020008	Clec7a	C-type lectin domain family 7, member a
B01	Mm.257765	NM_013885	Clic4	Chloride intracellular channel 4 (mitochondrial)
B02	Mm.157770	NM_007725	Cnn2	Calponin 2
B03	Mm.218571	NM_130449	Colec12	Collectin sub-family member 12
B04	Mm.280125	NM_133656	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
B05	Mm.28767	NM_007768	Crp	C-reactive protein, pentraxin-related
B06	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B07	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B08	Mm.21974	NM_007783	Csk	C-src tyrosine kinase
B09	Mm.275188	NM_028775	Cyp2s1	Cytochrome P450, family 2, subfamily s, polypeptide 1
B10	Mm.436572	NM_001033420	Dock1	Dedicator of cytokinesis 1
B11	Mm.380679	NM_033374	Dock2	Dedicator of cyto-kinesis 2
B12	Mm.342392	NM_198093	Elmo1	Engulfment and cell motility 1, ced-12 homolog (C. elegans)
C01	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
C02	Mm.22673	NM_010185	Fcgr1g	Fc receptor, IgE, high affinity I, gamma polypeptide
C03	Mm.150	NM_010186	Fcgr1	Fc receptor, IgG, high affinity I
C04	Mm.425062	NM_010187	Fcgr2b	Fc receptor, IgG, low affinity IIb
C05	Mm.22119	NM_010188	Fcgr3	Fc receptor, IgG, low affinity III
C06	Mm.4848	NM_008054	Fyn	Fyn proto-oncogene
C07	Mm.133132	NM_028450	Gulp1	GULP, engulfment adaptor PTB domain containing 1
C08	Mm.240327	NM_008337	Ifng	Interferon gamma
C09	Mm.289824	NM_010743	Il1rl1	Interleukin 1 receptor-like 1
C10	Mm.473438	NM_001134383	Iqsec1	IQ motif and Sec7 domain 1
C11	Mm.262106	NM_008401	Itgam	Integrin alpha M
C12	Mm.227	NM_008402	Itgav	Integrin alpha V
D01	Mm.11137	NM_008404	Itgb2	Integrin beta 2
D02	Mm.317331	NM_010747	Lyn	Yamaguchi sarcoma viral (v-src) oncogene homolog
D03	Mm.311337	NM_011951	Mapk14	Mitogen-activated protein kinase 14
D04	Mm.1856	NM_010766	Marco	Macrophage receptor with collagenous structure
D05	Mm.30045	NM_010776	Mbl2	Mannose-binding lectin (protein C) 2
D06	Mm.114683	NM_134160	Mcoln3	Mucolipin 3
D07	Mm.239655	NM_008587	Mertk	C-mer proto-oncogene tyrosine kinase
D08	Mm.1451	NM_008594	Mfge8	Milk fat globule-EGF factor 8 protein
D09	Mm.2326	NM_010798	Mif	Macrophage migration inhibitory factor
D10	Mm.138876	NM_010833	Msn	Moesin
D11	Mm.213003	NM_010851	Myd88	Myeloid differentiation primary response gene 88
D12	Mm.28498	NM_172729	Nod1	Nucleotide-binding oligomerization domain containing 1
E01	Mm.343951	NM_008816	Pecam1	Platelet/endothelial cell adhesion molecule 1
E02	Mm.213128	NM_029094	Pik3cb	Phosphatidylinositol 3-kinase, catalytic, beta polypeptide
E03	Mm.217214	NM_008846	Pip5k1a	Phosphatidylinositol 4-phosphate 5-kinase, type 1 alpha
E04	Mm.4186	NM_008869	Pla2g4a	Phospholipase A2, group IVA (cytosolic, calcium-dependent)
E05	Mm.486532	NM_011110	Pla2g5	Phospholipase A2, group V
E06	Mm.212039	NM_008875	Pld1	Phospholipase D1
E07	Mm.260177	NM_008876	Pld2	Phospholipase D2
E08	Mm.24614	NM_011104	Prkce	Protein kinase C, epsilon
E09	Mm.127156	NM_011173	Pros1	Protein S (alpha)

Position	UniGene	GenBank	Symbol	Description
E10	Mm.245395	NM_008960	Pten	Phosphatase and tensin homolog
E11	Mm.329123	NM_025887	Rab5a	RAB5A, member RAS oncogene family
E12	Mm.471618	NM_009005	Rab7	RAB7, member RAS oncogene family
F01	Mm.469963	NM_009007	Rac1	RAS-related C3 botulinum substrate 1
F02	Mm.1972	NM_009008	Rac2	RAS-related C3 botulinum substrate 2
F03	Mm.27348	NM_019491	Rala	V-ral simian leukemia viral oncogene homolog A (ras related)
F04	Mm.27832	NM_022327	Ralb	V-ral simian leukemia viral oncogene homolog B (ras related)
F05	Mm.24028	NM_144850	Rapgef3	Rap guanine nucleotide exchange factor (GEF) 3
F06	Mm.318359	NM_016802	Rhoa	Ras homolog gene family, member A
F07	Mm.474018	NM_016741	Scarb1	Scavenger receptor class B, member 1
F08	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F09	Mm.1321	NM_009160	Sftpd	Surfactant associated protein D
F10	Mm.1374	NM_011426	Siglec1	Sialic acid binding Ig-like lectin 1, sialoadhesin
F11	Mm.423523	NM_001002898	Sirpb1a	Signal-regulatory protein beta 1A
F12	Mm.279611	NM_138673	Stab2	Stabilin 2
G01	Mm.18959	NM_026959	Stx18	Syntaxin 18
G02	Mm.375031	NM_011518	Syk	Spleen tyrosine kinase
G03	Mm.330731	NM_009373	Tgm2	Transglutaminase 2, C polypeptide
G04	Mm.203952	NM_174989	Ticam1	Toll-like receptor adaptor molecule 1
G05	Mm.33874	NM_126166	Tlr3	Toll-like receptor 3
G06	Mm.44889	NM_031178	Tlr9	Toll-like receptor 9
G07	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G08	Mm.249221	NM_011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Mm.1517	NM_011515	Vamp7	Vesicle-associated membrane protein 7
G10	Mm.248172	NM_011691	Vav1	Vav 1 oncogene
G11	Mm.4735	NM_009515	Was	Wiskott-Aldrich syndrome homolog (human)
G12	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
H01	Mm.391967	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.304088	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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green ROX <sup>™</sup> 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.

---

RT<sup>2</sup> 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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, Rotor-Gene®, Rotor-Disc™ (QIAGEN Group); ROX™ (Applied Biosystems Corporation or its subsidiaries); SYBR® (Molecular Probes, Inc.).

1067688 03/2011 © 2011 QIAGEN, all rights reserved.

[www.qiagen.com](http://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