RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Phagocytosis

Cat. no. 330231 PARN-173ZR

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 Phagocytosis RT² 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 ΔΔCT 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 *RT² Profiler PCR Array Handbook*.

Shipping and storage

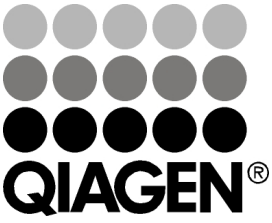
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on

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.24299	NM_144744	Adipoq	Adiponectin, C1Q and collagen domain containing
A02	Rn.9829	NM_053336	Ager	Advanced glycosylation end product-specific receptor
A03	Rn.1792	NM_012904	Anxa1	Annexin A1
A04	Rn.161805	NM_001013147	Axl	Axl receptor tyrosine kinase
A05	Rn.11378	NM_016994	C3	Complement component 3
A06	Rn.974	NM_022399	Calr	Calreticulin
A07	Rn.42942	NM_021744	Cd14	CD14 molecule
A08	Rn.102418	NM_031561	Cd36	CD36 molecule (thrombospondin receptor)
A09	Rn.1120	NM_012924	Cd44	Cd44 molecule
A10	Rn.7409	NM_019195	Cd47	Cd47 molecule
A11	Rn.230455	NM_012702	Ceacam3	Carcinoembryonic antigen-related cell adhesion molecule 3
A12	Rn.15743	NM_001173386	Clec7a	C-type lectin domain family 7, member a
B01	Rn.104756	NM_031818	Clic4	Chloride intracellular channel 4
B02	Rn.31788	NM_031747	Cnn1	Calponin 1, basic, smooth muscle
B03	Rn.57635	NM_019359	Cnn3	Calponin 3, acidic
B04	Rn.31273	NM_001025721	Colec12	Collectin sub-family member 12
B05	Rn.96136	NM_019302	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
B06	Rn.16463	NM_017096	Crp	C-reactive protein, pentraxin-related
B07	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B08	Rn.44285	NM_053852	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B09	Rn.2759	NM_001030039	Csk	C-src tyrosine kinase
B10	Rn.208847	NM_001107495	Cyp2s1	Cytochrome P450, family 2, subfamily s, polypeptide 1
B11	Rn.1482	NM_001143858	Dock1	Dedicator of cyto-kinesis 1
B12	Rn.233418	XM_001068649	Dock2	Dedicator of cytokinesis 2
C01	Rn.24911	NM_001108415	Elmo1	Engulfment and cell motility 1
C02	Rn.162521	NM_139194	Fas	Fas (TNF receptor superfamily, member 6)
C03	Rn.201810	NM_001131001	Fcer1g	Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide
C04	Rn.16643	NM_001100836	Fcgr1a	Fc fragment of IgG, high affinity Ia, receptor (CD64)
C05	Rn.154415	NM_053843	Fcgr2a	Fc fragment of IgG, low affinity IIa, receptor (CD32)
C06	Rn.33323	NM_175756	Fcgr2b	Fc fragment of IgG, low affinity IIb, receptor (CD32)
C07	Rn.228993	NM_012755	Fyn	FYN oncogene related to SRC, FGR, YES
C08	Rn.32649	NM_001013171	Gulp1	GULP, engulfment adaptor PTB domain containing 1
C09	Rn.10795	NM_138880	Ifng	Interferon gamma
C10	Rn.10072	NM_013037	Il1rl1	Interleukin 1 receptor-like 1
C11	Rn.54465	NM_012711	Itgam	Integrin, alpha M
C12	N/A	NM_001106549	Itgav	Integrin, alpha V
D01	Rn.42962	NM_001037780	Itgb2	Integrin, beta 2
D02	Rn.4338	NM_030857	Lyn	V-yes-1 Yamaguchi sarcoma viral related oncogene homolog
D03	Rn.88085	NM_031020	Mapk14	Mitogen activated protein kinase 14
D04	Rn.83054	NM_001109011	Marco	Macrophage receptor with collagenous structure
D05	Rn.9667	NM_022704	Mbl2	Mannose-binding lectin (protein C) 2
D06	Rn.214258	NM_001012059	Mcoln3	Mucolipin 3
D07	Rn.48789	NM_022943	Mertk	C-mer proto-oncogene tyrosine kinase
D08	Rn.3742	NM_012811	Mfge8	Milk fat globule-EGF factor 8 protein
D09	Rn.2661	NM_031051	Mif	Macrophage migration inhibitory factor
D10	Rn.2762	NM_030863	Msn	Moesin
D11	Rn.37341	NM_198130	Myd88	Myeloid differentiation primary response gene 88
D12	Rn.53929	NM_001109236	Nod1	Nucleotide-binding oligomerization domain containing 1
E01	Rn.218600	NM_001106172	Nod2	Nucleotide-binding oligomerization domain containing 2
E02	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
E03	Rn.44268	NM_053481	Pik3cb	Phosphoinositide-3-kinase, catalytic, beta polypeptide
E04	Rn.1836	NM_001042621	Pip5k1a	Phosphatidylinositol-4-phosphate 5-kinase, type 1, alpha
E05	Rn.10162	NM_133551	Pla2g4a	Phospholipase A2, group IVA (cytosolic, calcium-dependent)
E06	Rn.20244	NM_017174	Pla2g5	Phospholipase A2, group V
E07	Rn.11130	NM_030992	Pld1	Phospholipase D1
E08	Rn.9798	NM_033299	Pld2	Phospholipase D2
E09	Rn.215207	NM_017171	Prkce	Protein kinase C, epsilon

Position	UniGene	GenBank	Symbol	Description
E10	Rn.2888	NM_031086	Pros1	Protein S (alpha)
E11	Rn.22158	NM_031606	Pten	Phosphatase and tensin homolog
E12	Rn.44477	NM_022692	Rab5a	RAB5A, member RAS oncogene family
F01	Rn.1425	NM_023950	Rab7a	RAB7A, member RAS oncogene family
F02	Rn.29157	NM_134366	Rac1	Ras-related C3 botulinum toxin substrate 1
F03	Rn.2863	NM_001008384	Rac2	Ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)
F04	Rn.100380	NM_031093	Rala	V-ral simian leukemia viral oncogene homolog A (ras related)
F05	Rn.4586	NM_053821	Ralb	V-ral simian leukemia viral oncogene homolog B (ras related; GTP binding protein)
F06	Rn.42899	NM_021690	Rapgef3	Rap guanine nucleotide exchange factor (GEF) 3
F07	Rn.107401	NM_057132	Rhoa	Ras homolog gene family, member A
F08	Rn.88169	NM_031541	Scarb1	Scavenger receptor class B, member 1
F09	Rn.29367	NM_012620	Serpine1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
F10	Rn.11348	NM_012878	Sftpd	Surfactant protein D
F11	Rn.35268	NM_001107777	Siglec1	Sialic acid binding Ig-like lectin 1, sialoadhesin
F12	Rn.53971	NM_013016	Sirpa	Signal-regulatory protein alpha
G01	Rn.226947	NM_001246357	Stab2	Stabilin 2
G02	Rn.53006	NM_001012151	Stx18	Syntaxin 18
G03	Rn.87407	NM_012758	Syk	Spleen tyrosine kinase
G04	Rn.10	NM_019386	Tgm2	Transglutaminase 2, C polypeptide
G05	Rn.15273	NM_198791	Tlr3	Toll-like receptor 3
G06	Rn.92495	NM_198131	Tlr9	Toll-like receptor 9
G07	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G08	Rn.217570	NM_057149	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Rn.34151	NM_053531	Vamp7	Vesicle-associated membrane protein 7
G10	Rn.48861	NM_012759	Vav1	Vav 1 guanine nucleotide exchange factor
G11	Rn.207069	NM_001108248	Was	Wiskott-Aldrich syndrome homolog (human)
G12	Rn.48749	NM_022631	Wnt5a	Wingless-type MMTV integration site family, member 5A
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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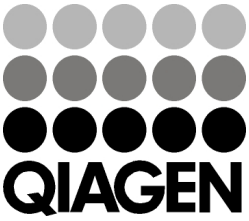

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