

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

## Mouse T Cell Anergy & Immune Tolerance

Cat. no. 330231 PAMM-074ZR

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 T-cell Anergy and Immune Tolerance RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 key genes involved in T-cell anergy and immune tolerance. T-cells' functional unresponsiveness, termed anergy, is a cell-intrinsic mechanism that contributes to peripheral self-tolerance. This array contains T-cell and B-cell regulators, cytokines and receptors, TNF superfamily members and their receptors, and transcriptional factors. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes involved in T-cell anergy and immune tolerance 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°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.



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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.38199	NM_177584	Btla	B and T lymphocyte associated
A02	Mm.328206	NM_001033238	Cblb	Casitas B-lineage lymphoma b
A03	Mm.1282	NM_011337	Ccl3	Chemokine (C-C motif) ligand 3
A04	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
A05	Mm.367714	NM_001033126	Cd27	CD27 antigen
A06	Mm.255003	NM_007642	Cd28	CD28 antigen
A07	Mm.271833	NM_011611	Cd40	CD40 antigen
A08	Mm.4861	NM_011616	Cd40lg	CD40 ligand
A09	Mm.42228	NM_011617	Cd70	CD70 antigen
A10	Mm.111326	NM_016756	Cdk2	Cyclin-dependent kinase 2
A11	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4
A12	Mm.1252	NM_010780	Cma1	Chymase 1, mast cell
B01	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B02	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B03	Mm.390	NM_009843	Ctla4	Cytotoxic T-lymphocyte-associated protein 4
B04	Mm.291235	NM_016811	Dgka	Diacylglycerol kinase, alpha
B05	Mm.314923	NM_138306	Dgkz	Diacylglycerol kinase zeta
B06	Mm.290421	NM_010118	Egr2	Early growth response 2
B07	Mm.103737	NM_018781	Egr3	Early growth response 3
B08	Mm.200692	NM_010136	Eomes	Eomesodermin homolog (Xenopus laevis)
B09	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
B10	Mm.3355	NM_010177	FasL	Fas ligand (TNF superfamily, member 6)
B11	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
B12	Mm.234965	NM_053202	Foxp1	Forkhead box P1
C01	Mm.332919	NM_053242	Foxp2	Forkhead box P2
C02	Mm.182291	NM_054039	Foxp3	Forkhead box P3
C03	Mm.313866	NM_008091	Gata3	GATA binding protein 3
C04	Mm.14874	NM_013542	Gzmb	Granzyme B
C05	Mm.310551	NM_024124	Hdac9	Histone deacetylase 9
C06	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
C07	Mm.42044	NM_017480	Icos	Inducible T-cell co-stimulator
C08	Mm.240327	NM_008337	Ifng	Interferon gamma
C09	Mm.874	NM_010548	Il10	Interleukin 10
C10	Mm.379327	NM_008348	Il10ra	Interleukin 10 receptor, alpha
C11	Mm.1284	NM_008355	Il13	Interleukin 13
C12	Mm.4392	NM_008357	Il15	Interleukin 15
D01	Mm.5419	NM_010552	Il17a	Interleukin 17A
D02	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
D03	Mm.14190	NM_008366	Il2	Interleukin 2
D04	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
D05	Mm.35287	NM_008368	Il2rb	Interleukin 2 receptor, beta chain
D06	Mm.75049	NM_029594	Il31	Interleukin 31
D07	Mm.276360	NM_021283	Il4	Interleukin 4
D08	Mm.4461	NM_010558	Il5	Interleukin 5
D09	Mm.1019	NM_031168	Il6	Interleukin 6
D10	Mm.389	NM_008372	Il7r	Interleukin 7 receptor
D11	Mm.262547	NM_133345	Ing4	Inhibitor of growth family, member 4
D12	Mm.4677	NM_013674	Irf4	Interferon regulatory factor 4
E01	Mm.208286	NM_008395	Itch	Itchy, E3 ubiquitin protein ligase
E02	Mm.482186	NM_001033228	Itga1	Integrin alpha 1
E03	Mm.289657	NM_146145	Jak1	Janus kinase 1
E04	Mm.249645	NM_010589	Jak3	Janus kinase 3
E05	Mm.275071	NM_010591	Jun	Jun oncogene
E06	Mm.10280	NM_010689	Lat	Linker for activation of T cells
E07	Mm.277072	NM_008493	Lep	Leptin
E08	Mm.248615	NM_010705	Lgals3	Lectin, galactose binding, soluble 3
E09	Mm.87787	NM_010735	Lta	Lymphotoxin A

Position	UniGene	GenBank	Symbol	Description
E10	Mm.132788	NM_001033713	Mef2a	Myocyte enhancer factor 2A
E11	Mm.329560	NM_016791	Nfatc1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1
E12	Mm.116802	NM_010899	Nfatc2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
F01	Mm.383185	NM_010901	Nfatc3	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
F02	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
F03	Mm.137286	NM_178777	Nhlh2	Nescient helix loop helix 2
F04	Mm.290610	NM_008714	Notch1	Notch gene homolog 1 (Drosophila)
F05	Mm.5024	NM_008798	Pcd1	Programmed cell death 1
F06	Mm.240313	NM_011073	Prf1	Perforin 1 (pore forming protein)
F07	Mm.7980	NM_011102	Prkcc	Protein kinase C, gamma
F08	Mm.4630	NM_008964	Ptger2	Prostaglandin E receptor 2 (subtype EP2)
F09	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F10	Mm.27764	NM_023270	Rnf128	Ring finger protein 128
F11	Mm.1461	NM_011346	Sell	Selectin, lymphocyte
F12	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G01	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
G02	Mm.477879	NM_019507	Tbx21	T-box 21
G03	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G04	Mm.193430	NM_020275	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b
G05	Mm.215147	NM_178931	Tnfrsf14	Tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)
G06	Mm.482508	NM_009400	Tnfrsf18	Tumor necrosis factor receptor superfamily, member 18
G07	Mm.13885	NM_011659	Tnfrsf4	Tumor necrosis factor receptor superfamily, member 4
G08	Mm.12810	NM_009401	Tnfrsf8	Tumor necrosis factor receptor superfamily, member 8
G09	Mm.244187	NM_011612	Tnfrsf9	Tumor necrosis factor receptor superfamily, member 9
G10	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G11	Mm.483369	NM_019418	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14
G12	Mm.4664	NM_009403	Tnfsf8	Tumor necrosis factor (ligand) superfamily, member 8
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, 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.

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