

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

## Rat T-Cell & B-Cell Activation

Cat. no. 330231 PARN-053ZR

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 Rat T-Cell & B-Cell Activation RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes representing T Cell and B Cell Activation, a key part of adaptive immunity. This array includes genes involved B-cell activation as well as genes involved in B-cell proliferation and differentiation. Genes involved in the activation of T-cells and their proliferation and differentiation are also represented along with genes regulating Th1 and Th2 development and T-cell polarization. Genes involved in the activation of macrophages, neutrophils, and natural killer cells are also included. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to T Cell and B Cell Activation 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	Rn.12689	NM_130399	Ada	Adenosine deaminase
A02	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A03	Rn.36696	NM_022698	Bad	BCL2-associated agonist of cell death
A04	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A05	Rn.10562	NM_012922	Casp3	Caspase 3
A06	Rn.21799	NM_133601	Cblb	Cas-Br-M (murine) ecotropic retroviral transforming sequence b
A07	Rn.10139	NM_013025	Cd3	Chemokine (C-C motif) ligand 3
A08	Rn.37880	NM_053858	Ccl4	Chemokine (C-C motif) ligand 4
A09	Rn.3483	NM_012766	Ccnd3	Cyclin D3
A10	Rn.9890	NM_053958	Ccr3	Chemokine (C-C motif) receptor 3
A11	Rn.81076	NM_133532	Ccr4	Chemokine (C-C motif) receptor 4
A12	Rn.11120	NM_017079	Cd1d1	CD1d1 molecule
B01	Rn.10328	NM_012830	Cd2	Cd2 molecule
B02	Rn.76129	NM_182824	Cd276	Cd276 molecule
B03	Rn.10327	NM_013121	Cd28	Cd28 molecule
B04	Rn.11414	NM_013127	Cd38	CD38 molecule
B05	Rn.10329	NM_013169	Cd3d	CD3 molecule, delta
B06	Rn.96221	NM_001108140	Cd3e	CD3 molecule, epsilon
B07	Rn.202653	NM_001077646	Cd3g	CD3 molecule, gamma
B08	Rn.10748	NM_012705	Cd4	Cd4 molecule
B09	Rn.25180	NM_134360	Cd40	CD40 molecule, TNF receptor superfamily member 5
B10	Rn.44218	NM_053353	Cd40lg	CD40 ligand
B11	Rn.7409	NM_019195	Cd47	Cd47 molecule
B12	Rn.3705	NM_139103	Cd48	Cd48 molecule
C01	Rn.33804	NM_013069	Cd74	Cd74 molecule, major histocompatibility complex, class II invariant chain
C02	Rn.178258	XM_001060872	Cd79a	Cd79a molecule, immunoglobulin-associated alpha
C03	Rn.1975	NM_013087	Cd81	Cd81 molecule
C04	Rn.10306	NM_031538	Cd8a	CD8a molecule
C05	Rn.10330	NM_031539	Cd8b	CD8b molecule
C06	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
C07	Rn.23490	NM_001105989	Cr2	Complement receptor 2
C08	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
C09	Rn.10259	NM_031674	Ctla4	Cytotoxic T-lymphocyte-associated protein 4
C10	Rn.54439	NM_022177	Cxcl12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
C11	Rn.44431	NM_022205	Cxcr4	Chemokine (C-X-C motif) receptor 4
C12	Rn.127121	NM_053303	Cxcr5	Chemokine (C-X-C motif) receptor 5
D01	Rn.91364	NM_012789	Dpp4	Dipeptidylpeptidase 4
D02	Rn.9096	NM_012551	Egr1	Early growth response 1
D03	Rn.6774	NM_001100822	Fh3	Fms-related tyrosine kinase 3
D04	Rn.177272	NM_001108250	Foxp3	Forkhead box P3
D05	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
D06	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
D07	Rn.10795	NM_138880	Ifng	Interferon gamma
D08	Rn.9868	NM_012854	Il10	Interleukin 10
D09	Rn.198483	NM_133519	Il11	Interleukin 11
D10	Rn.48686	NM_022611	Il12b	Interleukin 12b
D11	Rn.2490	NM_013129	Il15	Interleukin 15
D12	Rn.11118	NM_019165	Il18	Interleukin 18
E01	Rn.149181	NM_001106905	Il18r1	Interleukin 18 receptor 1
E02	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
E03	Rn.9871	NM_053836	Il2	Interleukin 2
E04	N/A	XM_344962	Il27	Interleukin 27
E05	Rn.9872	NM_013163	Il2ra	Interleukin 2 receptor, alpha
E06	Rn.108255	NM_201270	Il4	Interleukin 4
E07	Rn.9873	NM_012589	Il6	Interleukin 6
E08	Rn.10793	NM_013110	Il7	Interleukin 7
E09	Rn.8831	NM_012590	Inha	Inhibin alpha

Position	UniGene	GenBank	Symbol	Description
E10	Rn.82114	NM_001106108	Irf4	Interferon regulatory factor 4
E11	Rn.22459	XM_343119	Jag2	Jagged 2
E12	Rn.22791	NM_001100709	Lck	Lymphocyte-specific protein tyrosine kinase
F01	Rn.24019	NM_001107920	Map3k7	Mitogen activated protein kinase kinase kinase 7
F02	Rn.16385	NM_001107578	Ms4a1	Membrane-spanning 4-domains, subfamily A, member 1
F03	Rn.8768	NM_001106851	Nck1	NCK adaptor protein 1
F04	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
F05	Rn.90070	NM_012576	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
F06	Rn.40296	NM_001107787	Pax1	Paired box 1
F07	Rn.130112	NM_001107582	Pdcd1lg2	Programmed cell death 1 ligand 2
F08	Rn.10599	NM_013005	Pik3r1	Phosphoinositide-3-kinase, regulatory subunit 1 (alpha)
F09	Rn.98279	NM_133307	Prkcd	Protein kinase C, delta
F10	Rn.8227	XM_341553	Prkcq	Protein kinase C, theta
F11	Rn.9757	NM_012630	Prlr	Prolactin receptor
F12	Rn.90166	NM_001109887	Ptprc	Protein tyrosine phosphatase, receptor type, C
G01	Rn.92344	NM_053468	Rag1	Recombination activating gene 1
G02	Rn.82754	NM_145879	Socs1	Suppressor of cytokine signaling 1
G03	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
G04	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G05	Rn.107212	NM_001172120	Tlr1	Toll-like receptor 1
G06	Rn.14534	NM_019178	Tlr4	Toll-like receptor 4
G07	Rn.163249	NM_207604	Tlr6	Toll-like receptor 6
G08	N/A	XM_236794	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14
G09	Rn.54443	NM_030989	Tp53	Tumor protein p53
G10	Rn.220435	NM_001107754	Traf6	Tnf receptor-associated factor 6
G11	Rn.48861	NM_012759	Vav1	Vav 1 guanine nucleotide exchange factor
G12	Rn.207069	NM_001108248	Was	Wiskott-Aldrich syndrome homolog (human)
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, 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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