RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Antiviral Response

Cat. no. 330231 PARN-122ZR

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 Antiviral Response RT² Profiler PCR Array profiles the expression of 84 key genes involved in the innate antiviral immune response. Three different families of pattern recognition receptors (PRRs) (toll-like (TLRs), Nod-like (NLRs), and RIG-I-like receptors) initiate innate immunity, the inborn general host response to common pathogens such as viruses. These receptors recognize and bind viral DNA and RNA, activating downstream signaling to induce the expression of inflammatory cytokines including alpha and beta interferons. Alpha and beta interferons mediate type-I interferon signaling that activates dendritic and natural killer cells as well as the adaptive immune response. Some viral nucleic acids bind to multiple PRRs, and each immune cell type expresses a specific set of PRRs. This array contains the receptors and signaling effectors for TLRs, NLRs and RIG-I-like receptors, the genes responsive to these pathways, and the genes involved in type-I interferon signaling as well as downstream interferon-stimulated genes (ISGs). The results of this array allow you to study the interactions of these innate immune signaling networks with a specific viral infection. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes involved in innate immunity 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.6224	NM_001038495	Atg12	ATG12 autophagy related 12 homolog (S. cerevisiae)
A02	Rn.161972	NM_001025705	Azi2	5-azacytidine induced 2
A03	Rn.64486	NM_022303	Card9	Caspase recruitment domain family, member 9
A04	Rn.37508	NM_012762	Casp1	Caspase 1
A05	Rn.54474	NM_022277	Casp8	Caspase 8
A06	Rn.10139	NM_013025	Ccl3	Chemokine (C-C motif) ligand 3
A07	Rn.37880	NM_053858	Ccl4	Chemokine (C-C motif) ligand 4
A08	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
A09	Rn.25180	NM_134360	Cd40	CD40 molecule, TNF receptor superfamily member 5
A10	Rn.10138	NM_012926	Cd80	Cd80 molecule
A11	Rn.6734	NM_020081	Cd86	CD86 molecule
A12	Rn.23019	NM_001107588	Chuk	Conserved helix-loop-helix ubiquitous kinase
B01	Rn.43984	NM_001134710	Cnpy3	Canopy 3 homolog (zebrafish)
B02	Rn.100909	NM_022597	Ctsb	Cathepsin B
B03	Rn.1294	NM_013156	Ctsl1	Cathepsin L1
B04	Rn.11347	NM_017320	Ctss	Cathepsin S
B05	Rn.10584	NM_139089	Cxcl10	Chemokine (C-X-C motif) ligand 10
B06	Rn.13664	NM_182952	Cxcl11	Chemokine (C-X-C motif) ligand 11
B07	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
B08	Rn.128760	NM_001017380	Cyld	Cylindromatosis (turban tumor syndrome)
B09	Rn.55630	NM_001039031	Dak	Dihydroxyacetone kinase 2 homolog (S. cerevisiae)
B10	Rn.95841	NM_001108246	Ddx3x	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, X-linked
B11	Rn.38642	NM_001106645	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
B12	Rn.105654	NM_001098788	Dhx58	DEXH (Asp-Glu-X-His) box polypeptide 58
C01	Rn.16183	NM_152937	Fadd	Fas (TNFRSF6)-associated via death domain
C02	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C03	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
C04	N/A	XM_233152	Ifna2	Interferon alpha family, gene 2
C05	Rn.105738	NM_001105893	Ifnar1	Interferon (alpha, beta and omega) receptor 1
C06	Rn.138105	NM_019127	Ifnb1	Interferon beta 1, fibroblast
C07	Rn.19222	NM_053355	Ikbkb	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta
C08	Rn.207199	NM_053390	Il12a	Interleukin 12a
C09	Rn.48686	NM_022611	Il12b	Interleukin 12b
C10	Rn.2490	NM_013129	Il15	Interleukin 15
C11	Rn.11118	NM_019165	Il18	Interleukin 18
C12	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D01	Rn.9873	NM_012589	Il6	Interleukin 6
D02	Rn.22238	NM_001127555	Irak1	Interleukin-1 receptor-associated kinase 1
D03	Rn.61427	NM_001106791	Irak4	Interleukin-1 receptor-associated kinase 4
D04	Rn.1499	NM_001006969	Irf3	Interferon regulatory factor 3
D05	Rn.203787	NM_001106586	Irf5	Interferon regulatory factor 5
D06	Rn.101159	NM_001033691	Irf7	Interferon regulatory factor 7
D07	Rn.198318	NM_001106700	Isg15	ISG15 ubiquitin-like modifier
D08	Rn.93714	NM_021835	Jun	Jun oncogene
D09	Rn.206021	NM_022226	Lgmn	Legumain
D10	Rn.5850	NM_031643	Map2k1	Mitogen activated protein kinase kinase 1
D11	Rn.100064	NM_001100674	Map2k3	Mitogen activated protein kinase kinase 3
D12	Rn.198875	NM_001030023	Map2k4	Mitogen activated protein kinase kinase 4
E01	Rn.11081	NM_053887	Map3k1	Mitogen activated protein kinase kinase kinase 1
E02	Rn.24019	NM_001107920	Map3k7	Mitogen activated protein kinase kinase kinase 7
E03	Rn.19523	NM_001012062	Map3k7ip2	Mitogen-activated protein kinase kinase kinase 7 interacting protein 2
E04	Rn.34914	NM_053842	Mapk1	Mitogen activated protein kinase 1
E05	Rn.9911	NM_012806	Mapk10	Mitogen activated protein kinase 10
E06	Rn.88085	NM_031020	Mapk14	Mitogen activated protein kinase 14
E07	Rn.2592	NM_017347	Mapk3	Mitogen activated protein kinase 3
E08	Rn.4090	XM_341399	Mapk8	Mitogen-activated protein kinase 8
E09	Rn.34996	NM_001005556	Mavs	Mitochondrial antiviral signaling protein

Position	UniGene	GenBank	Symbol	Description
E10	Rn.29105	NM_031634	Mefv	Mediterranean fever
E11	Rn.10373	NM_173096	Mx1	Myxovirus (influenza virus) resistance 1
E12	Rn.37341	NM_198130	Myd88	Myeloid differentiation primary response gene 88
F01	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F02	Rn.12550	NM_001105720	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F03	Rn.214177	XM_220513	Nlrp3	NLR family, pyrin domain containing 3
F04	Rn.218600	NM_001106172	Nod2	Nucleotide-binding oligomerization domain containing 2
F05	Rn.136740	NM_001009715	Oas2	2'-5' oligoadenylate synthetase 2
F06	Rn.6291	NM_001106701	Pin1	Peptidylprolyl cis/trans isomerase, NIMA-interacting 1
F07	Rn.6937	NM_001106824	Pstpip1	Proline-serine-threonine phosphatase-interacting protein 1
F08	Rn.7817	NM_172322	Pycard	PYD and CARD domain containing
F09	Rn.19480	NM_199267	Rela	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
F10	Rn.7572	NM_001107350	Ripk1	Receptor (TNFRSF)-interacting serine-threonine kinase 1
F11	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
F12	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G01	Rn.101758	NM_001013051	Sugt1	SGT1, suppressor of G2 allele of SKP1 (S. cerevisiae)
G02	Rn.89906	NM_145788	Tank	TRAF family member-associated NFKB activator
G03	Rn.30683	NM_001106786	Tbk1	TANK-binding kinase 1
G04	Rn.33571	NM_172021	Tbkbp1	TBK1 binding protein 1
G05	Rn.15273	NM_198791	Tlr3	Toll-like receptor 3
G06	Rn.219862	NM_001097582	Tlr7	Toll-like receptor 7
G07	Rn.92495	NM_198131	Tlr9	Toll-like receptor 9
G08	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G09	Rn.18545	NM_001100480	Tradd	TNFRSF1A-associated via death domain
G10	Rn.12033	NM_001108724	Traf3	Tnf receptor-associated factor 3
G11	Rn.220435	NM_001107754	Traf6	Tnf receptor-associated factor 6
G12	Rn.34382	NM_001009536	Trim25	Tripartite motif-containing 25
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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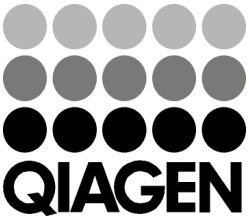

Sample & Assay Technologies