RT² Profiler PCR Array (Rotor-Gene® Format)

Human Inflammasomes

Cat. no. 330231 PAHS-097ZR

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 Human Inflammasomes RT² Profiler PCR Array profiles the expression of 84 key genes involved in the function of inflammasomes, protein complexes involved in innate immunity, as well as general NOD-like receptor (NLR) signaling. NLRs represent a major class of cytosolic pattern recognition receptors (PRR) that, like their cell-surface Toll-Like Receptor counterparts, recognize a wide variety of microbial pathogens and immunogenic biological products. Activation of one of four PRR family members (AIM2, NLRC4 or IPAF, NLRP1, and NLRP3) initiates the formation of an inflammasome. These protein complexes in turn activate caspase-1, leading to up-regulation of the pro-inflammatory cytokines IL1B and IL18 and pyroptosis, or caspase-1-dependent programmed cell death. This array includes genes encoding inflammasome components as well as genes involved in downstream signaling and inhibition of inflammasome function. In addition, this array includes other NLR family members, which may potentially form additional inflammasomes, and their downstream signaling genes. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in inflammasome and NLR function and signaling with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

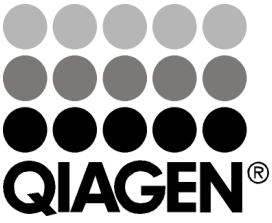
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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	Hs.281898	NM_004833	AIM2	Absent in melanoma 2
A02	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A03	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A04	Hs.696238	NM_001166	BIRC2	Baculoviral IAP repeat containing 2
A05	Hs.127799	NM_001165	BIRC3	Baculoviral IAP repeat containing 3
A06	Hs.56279	NM_021571	CARD18	Caspase recruitment domain family, member 18
A07	Hs.200242	NM_032587	CARD6	Caspase recruitment domain family, member 6
A08	Hs.2490	NM_033292	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
A09	Hs.213327	NM_004347	CASP5	Caspase 5, apoptosis-related cysteine peptidase
A10	Hs.599762	NM_001228	CASP8	Caspase 8, apoptosis-related cysteine peptidase
A11	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A12	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B01	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
B02	Hs.592244	NM_000074	CD40LG	CD40 ligand
B03	Hs.390736	NM_003879	CFLAR	CASP8 and FADD-like apoptosis regulator
B04	Hs.198998	NM_001278	CHUK	Conserved helix-loop-helix ubiquitous kinase
B05	Hs.701991	NM_000246	CIITA	Class II, major histocompatibility complex, transactivator
B06	Hs.520898	NM_001908	CTSB	Cathepsin B
B07	Hs.789	NM_001511	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
B08	Hs.590921	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
B09	Hs.86131	NM_003824	FADD	Fas (TNFRSF6)-associated via death domain
B10	Hs.525600	NM_001017963	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1
B11	Hs.509736	NM_007355	HSP90AB1	Heat shock protein 90kDa alpha (cytosolic), class B member 1
B12	Hs.192374	NM_003299	HSP90B1	Heat shock protein 90kDa beta (Grp94), member 1
C01	Hs.93177	NM_002176	IFNB1	Interferon, beta 1, fibroblast
C02	Hs.856	NM_000619	IFNG	Interferon, gamma
C03	Hs.597664	NM_001556	IKBKB	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta
C04	Hs.43505	NM_003639	IKBKG	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
C05	Hs.673	NM_000882	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)
C06	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
C07	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
C08	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
C09	Hs.348390	NM_033439	IL33	Interleukin 33
C10	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
C11	Hs.522819	NM_001569	IRAK1	Interleukin-1 receptor-associated kinase 1
C12	Hs.436061	NM_002198	IRF1	Interferon regulatory factor 1
D01	Hs.654566	NM_002199	IRF2	Interferon regulatory factor 2
D02	Hs.644143	NM_003188	MAP3K7	Mitogen-activated protein kinase kinase kinase 7
D03	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
D04	Hs.57732	NM_002751	MAPK11	Mitogen-activated protein kinase 11
D05	Hs.432642	NM_002969	MAPK12	Mitogen-activated protein kinase 12
D06	Hs.178695	NM_002754	MAPK13	Mitogen-activated protein kinase 13
D07	Hs.861	NM_002746	MAPK3	Mitogen-activated protein kinase 3
D08	Hs.138211	NM_002750	MAPK8	Mitogen-activated protein kinase 8
D09	Hs.484371	NM_002752	MAPK9	Mitogen-activated protein kinase 9
D10	Hs.632221	NM_000243	MEFV	Mediterranean fever
D11	Hs.82116	NM_002468	MYD88	Myeloid differentiation primary response gene (88)
D12	Hs.710305	NM_004536	NAIP	NLR family, apoptosis inhibitory protein
E01	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E02	Hs.81328	NM_020529	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
E03	Hs.9731	NM_002503	NFKBIB	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta
E04	Hs.574741	NM_021209	NLRC4	NLR family, CARD domain containing 4
E05	Hs.528836	NM_032206	NLRC5	NLR family, CARD domain containing 5
E06	Hs.104305	NM_033004	NLRP1	NLR family, pyrin domain containing 1

Position	UniGene	GenBank	Symbol	Description
E07	Hs.631573	NM_033297	NLRP12	NLR family, pyrin domain containing 12
E08	Hs.159483	NM_183395	NLRP3	NLR family, pyrin domain containing 3
E09	Hs.631533	NM_134444	NLRP4	NLR family, pyrin domain containing 4
E10	Hs.356872	NM_153447	NLRP5	NLR family, pyrin domain containing 5
E11	Hs.352611	NM_138329	NLRP6	NLR family, pyrin domain containing 6
E12	Hs.661568	NM_176820	NLRP9	NLR family, pyrin domain containing 9
F01	Hs.524082	NM_024618	NLRX1	NLR family member X1
F02	Hs.405153	NM_006092	NOD1	Nucleotide-binding oligomerization domain containing 1
F03	Hs.592072	NM_022162	NOD2	Nucleotide-binding oligomerization domain containing 2
F04	Hs.729169	NM_002562	P2RX7	Purinergic receptor P2X, ligand-gated ion channel, 7
F05	Hs.591976	NM_015368	PANX1	Pannexin 1
F06	Hs.517216	NM_003768	PEA15	Phosphoprotein enriched in astrocytes 15
F07	Hs.129758	NM_003978	PSTPIP1	Proline-serine-threonine phosphatase interacting protein 1
F08	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F09	Hs.499094	NM_013258	PYCARD	PYD and CARD domain containing
F10	Hs.58314	NM_152901	PYDC1	PYD (pyrin domain) containing 1
F11	Hs.104119	NM_014226	RAGE	Renal tumor antigen
F12	Hs.502875	NM_021975	RELA	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
G01	Hs.103755	NM_003821	RIPK2	Receptor-interacting serine-threonine kinase 2
G02	Hs.281902	NM_006704	SUGT1	SGT1, suppressor of G2 allele of SKP1 (S. cerevisiae)
G03	Hs.507681	NM_006116	TAB1	TGF-beta activated kinase 1/MAP3K7 binding protein 1
G04	Hs.269775	NM_015093	TAB2	TGF-beta activated kinase 1/MAP3K7 binding protein 2
G05	Hs.537126	NM_001039661	TIRAP	Toll-interleukin 1 receptor (TIR) domain containing adaptor protein
G06	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G07	Hs.333791	NM_003701	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G08	Hs.129708	NM_003807	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
G09	Hs.181097	NM_003326	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G10	Hs.591983	NM_004620	TRAF6	TNF receptor-associated factor 6
G11	Hs.533977	NM_006472	TXNIP	Thioredoxin interacting protein
G12	Hs.356076	NM_001167	XIAP	X-linked inhibitor of apoptosis
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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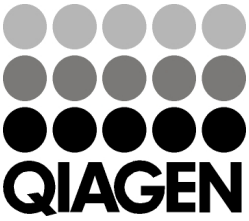

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