# RT² Profiler PCR Array (Rotor-Gene® Format)

# Rat Inflammasomes

### Cat. no. 330231 PARN-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 Rat 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

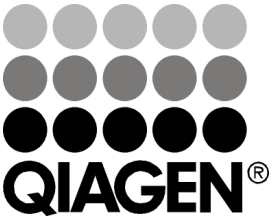
RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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 | Rn.9996 | NM_016993 | Bcl2 | B-cell CLL/lymphoma 2 |
| A02 | Rn.10323 | NM_031535 | Bcl2l1 | Bcl2-like 1 |
| A03 | Rn.205955 | NM_021752 | Birc2 | Baculoviral IAP repeat-containing 2 |
| A04 | Rn.64578 | NM_023987 | Birc3 | Baculoviral IAP repeat-containing 3 |
| A05 | Rn.104526 | NM_001106413 | Card6 | Caspase recruitment domain family, member 6 |
| A06 | Rn.37508 | NM_012762 | Casp1 | Caspase 1 |
| A07 | Rn.81078 | NM_130422 | Casp12 | Caspase 12 |
| A08 | Rn.54474 | NM_022277 | Casp8 | Caspase 8 |
| A09 | Rn.10632 | NM_019205 | Ccl11 | Chemokine (C-C motif) ligand 11 |
| A10 | Rn.137780 | NM_001105822 | Ccl12 | Chemokine (C-C motif) ligand 12 |
| A11 | Rn.4772 | NM_031530 | Ccl2 | Chemokine (C-C motif) ligand 2 |
| A12 | Rn.8019 | NM_031116 | Ccl5 | Chemokine (C-C motif) ligand 5 |
| B01 | Rn.26815 | NM_001007612 | Ccl7 | Chemokine (C-C motif) ligand 7 |
| B02 | Rn.44218 | NM_053353 | Cd40lg | CD40 ligand |
| B03 | Rn.204752 | NM_057138 | Cflar | CASP8 and FADD-like apoptosis regulator |
| B04 | Rn.23019 | NM_001107588 | Chuk | Conserved helix-loop-helix ubiquitous kinase |
| B05 | Rn.162013 | NM_053529 | Ciita | Class II, major histocompatibility complex, transactivator |
| B06 | Rn.100909 | NM_022597 | Ctsb | Cathepsin B |
| B07 | Rn.10907 | NM_030845 | Cxcl1 | Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha) |
| B08 | Rn.10525 | NM_138522 | Cxcl3 | Chemokine (C-X-C motif) ligand 3 |
| B09 | Rn.16183 | NM_152937 | Fadd | Fas (TNFRSF6)-associated via death domain |
| B10 | Rn.119867 | NM_175761 | Hsp90aa1 | Heat shock protein 90, alpha (cytosolic), class A member 1 |
| B11 | Rn.98667 | NM_001004082 | Hsp90ab1 | Heat shock protein 90 alpha (cytosolic), class B member 1 |
| B12 | Rn.101146 | NM_001012197 | Hsp90b1 | Heat shock protein 90, beta, member 1 |
| C01 | Rn.138105 | NM_019127 | Ifnb1 | Interferon beta 1, fibroblast |
| C02 | Rn.10795 | NM_138880 | Ifng | Interferon gamma |
| C03 | Rn.19222 | NM_053355 | Ikbkb | Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta |
| C04 | Rn.214715 | NM_199103 | Ikbkg | Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma |
| C05 | Rn.207199 | NM_053390 | Il12a | Interleukin 12a |
| C06 | Rn.48686 | NM_022611 | Il12b | Interleukin 12b |
| C07 | Rn.11118 | NM_019165 | Il18 | Interleukin 18 |
| C08 | Rn.9869 | NM_031512 | Il1b | Interleukin 1 beta |
| C09 | Rn.106849 | NM_001014166 | Il33 | Interleukin 33 |
| C10 | Rn.9873 | NM_012589 | Il6 | Interleukin 6 |
| C11 | Rn.22238 | NM_001127555 | Irak1 | Interleukin-1 receptor-associated kinase 1 |
| C12 | Rn.6396 | NM_012591 | Irf1 | Interferon regulatory factor 1 |
| D01 | Rn.107887 | NM_001047086 | Irf2 | Interferon regulatory factor 2 |
| D02 | Rn.1499 | NM_001006969 | Irf3 | Interferon regulatory factor 3 |
| D03 | Rn.82114 | NM_001106108 | Irf4 | Interferon regulatory factor 4 |
| D04 | Rn.203787 | NM_001106586 | Irf5 | Interferon regulatory factor 5 |
| D05 | Rn.12385 | NM_001108859 | Irf6 | Interferon regulatory factor 6 |
| D06 | Rn.24019 | NM_001107920 | Map3k7 | Mitogen activated protein kinase kinase kinase 7 |
| D07 | Rn.17231 | NM_001109976 | Map3k7ip1 | Mitogen-activated protein kinase kinase kinase 7 interacting protein 1 |
| D08 | Rn.19523 | NM_001012062 | Map3k7ip2 | Mitogen-activated protein kinase kinase kinase 7 interacting protein 2 |
| D09 | Rn.34914 | NM_053842 | Mapk1 | Mitogen activated protein kinase 1 |
| D10 | Rn.45869 | NM_001109532 | Mapk11 | Mitogen-activated protein kinase 11 |
| D11 | Rn.162968 | NM_021746 | Mapk12 | Mitogen-activated protein kinase 12 |
| D12 | Rn.207195 | NM_019231 | Mapk13 | Mitogen activated protein kinase 13 |
| E01 | Rn.88085 | NM_031020 | Mapk14 | Mitogen activated protein kinase 14 |
| E02 | Rn.2592 | NM_017347 | Mapk3 | Mitogen activated protein kinase 3 |
| E03 | Rn.4090 | XM_341399 | Mapk8 | Mitogen-activated protein kinase 8 |
| E04 | Rn.9910 | NM_017322 | Mapk9 | Mitogen-activated protein kinase 9 |
| E05 | Rn.29105 | NM_031634 | Mefv | Mediterranean fever |
| E06 | Rn.37341 | NM_198130 | Myd88 | Myeloid differentiation primary response gene 88 |
| E07 | Rn.92423 | XM_226742 | Naip2 | NLR family, apoptosis inhibitory protein 2 |
| E08 | Rn.2411 | XM_342346 | Nfkb1 | Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 |
| | | | | Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, |

| Position | UniGene | GenBank | Symbol | Description |
|---|---|---|---|---|
| E09 | Rn.12550 | NM_001105720 | Nfkbia | alpha |
| E10 | Rn.8395 | NM_030867 | Nfkbib | Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta |
| E11 | Rn.144882 | NM_001106707 | Nlrc4 | NLR family, CARD domain containing 4 |
| E12 | Rn.108865 | NM_001169142 | Nlrp12 | NLR family, pyrin domain containing 12 |
| F01 | Rn.12490 | NM_001145755 | Nlrp1a | NLR family, pyrin domain containing 1A |
| F02 | Rn.214177 | XM_220513 | Nlrp3 | NLR family, pyrin domain containing 3 |
| F03 | Rn.218519 | NM_001107474 | Nlrp5 | NLR family, pyrin domain containing 5 |
| F04 | Rn.9669 | NM_134375 | Nlrp6 | NLR family, pyrin domain containing 6 |
| F05 | Rn.12444 | NM_001025010 | Nlrx1 | NLR family member X1 |
| F06 | Rn.218600 | NM_001106172 | Nod2 | Nucleotide-binding oligomerization domain containing 2 |
| F07 | Rn.10510 | NM_019256 | P2rx7 | Purinergic receptor P2X, ligand-gated ion channel, 7 |
| F08 | Rn.204521 | NM_199397 | Panx1 | Pannexin 1 |
| F09 | Rn.155339 | NM_001013231 | Pea15a | Phosphoprotein enriched in astrocytes 15A |
| F10 | Rn.6937 | NM_001106824 | Pstpip1 | Proline-serine-threonine phosphatase-interacting protein 1 |
| F11 | Rn.44369 | NM_017232 | Ptgs2 | Prostaglandin-endoperoxide synthase 2 |
| F12 | Rn.7817 | NM_172322 | Pycard | PYD and CARD domain containing |
| G01 | Rn.63172 | NM_001010965 | Rage | Renal tumor antigen |
| G02 | Rn.19480 | NM_199267 | Rela | V-rel reticuloendotheliosis viral oncogene homolog A (avian) |
| G03 | Rn.102179 | XM_342810 | Ripk2 | Receptor-interacting serine-threonine kinase 2 |
| G04 | Rn.101758 | NM_001013051 | Sugt1 | SGT1, suppressor of G2 allele of SKP1 (S. cerevisiae) |
| G05 | N/A | XM_001055833 | Tirap | Toll-interleukin 1 receptor (TIR) domain-containing adaptor protein |
| G06 | Rn.2275 | NM_012675 | Tnf | Tumor necrosis factor (TNF superfamily, member 2) |
| G07 | Rn.64517 | NM_057149 | Tnfsf11 | Tumor necrosis factor (ligand) superfamily, member 11 |
| G08 | N/A | XM_236794 | Tnfsf14 | Tumor necrosis factor (ligand) superfamily, member 14 |
| G09 | Rn.30043 | NM_053552 | Tnfsf4 | Tumor necrosis factor (ligand) superfamily, member 4 |
| G10 | Rn.220435 | NM_001107754 | Traf6 | Tnf receptor-associated factor 6 |
| G11 | Rn.2758 | NM_001008767 | Txnip | Thioredoxin interacting protein |
| G12 | Rn.91239 | NM_022231 | Xiap | X-linked inhibitor of apoptosis |
| 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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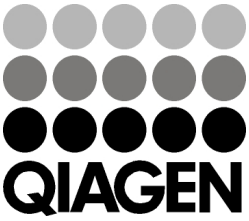


Sample & Assay Technologies