

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

## Human JAK / STAT Signaling Pathway PCR Array

Cat. no. 330231 PAHS-039YR

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 Human JAK / STAT Signaling Pathway RT<sup>2</sup> Profiler™ PCR Array profiles the expression of 84 genes related to Jak- and Stat-mediated signaling. The array represents all known Jak and Stat family members, the receptors that activate them, nuclear co-factors and co-activators associated with the Stat proteins, Stat-inducible genes, and negative regulators of the pathway. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the Jak / Stat Signaling Pathway 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.



## 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	Hs.212838	NM_000014	A2M	Alpha-2-macroglobulin
A02	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A03	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A04	Hs.523852	NM_053056	CCND1	Cyclin D1
A05	Hs.732576	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
A06	Hs.719041	NM_005194	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
A07	Hs.440829	NM_005195	CEBPD	CCAAT/enhancer binding protein (C/EBP), delta
A08	Hs.461896	NM_016823	CRK	V-crk sarcoma virus CT10 oncogene homolog (avian)
A09	Hs.76452	NM_000567	CRP	C-reactive protein, pentraxin-related
A10	Hs.719189	NM_005211	CSF1R	Colony stimulating factor 1 receptor
A11	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
A12	Hs.605083	NM_005228	EGFR	Epidermal growth factor receptor
B01	Hs.631624	NM_000121	EPOR	Erythropoietin receptor
B02	Hs.655207	NM_000506	F2	Coagulation factor II (thrombin)
B03	Hs.482562	NM_001992	F2R	Coagulation factor II (thrombin) receptor
B04	Hs.244139	NM_000043	FAS	Fas (TNF receptor superfamily, member 6)
B05	Hs.465778	NM_002002	FCER2	Fc fragment of IgE, low affinity II, receptor for (CD23)
B06	Hs.77424	NM_000566	FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64)
B07	Hs.524134	NM_002051	GATA3	GATA binding protein 3
B08	Hs.684632	NM_000163	GHR	Growth hormone receptor
B09	Hs.444356	NM_002086	GRB2	Growth factor receptor-bound protein 2
B10	Hs.529400	NM_000629	IFNAR1	Interferon (alpha, beta and omega) receptor 1
B11	Hs.856	NM_000619	IFNG	Interferon, gamma
B12	Hs.520414	NM_000416	IFNGR1	Interferon gamma receptor 1
C01	Hs.504035	NM_001558	IL10RA	Interleukin 10 receptor, alpha
C02	Hs.272373	NM_018724	IL20	Interleukin 20
C03	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
C04	Hs.84	NM_000206	IL2RG	Interleukin 2 receptor, gamma
C05	Hs.73917	NM_000589	IL4	Interleukin 4
C06	Hs.742121	NM_000418	IL4R	Interleukin 4 receptor
C07	Hs.706627	NM_002184	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
C08	Hs.465744	NM_000208	INSR	Insulin receptor
C09	Hs.436061	NM_002198	IRF1	Interferon regulatory factor 1
C10	Hs.1706	NM_006084	IRF9	Interferon regulatory factor 9
C11	Hs.458485	NM_005101	ISG15	ISG15 ubiquitin-like modifier
C12	Hs.207538	NM_002227	JAK1	Janus kinase 1
D01	Hs.656213	NM_004972	JAK2	Janus kinase 2
D02	Hs.515247	NM_000215	JAK3	Janus kinase 3
D03	Hs.696684	NM_002228	JUN	Jun proto-oncogene
D04	Hs.25292	NM_002229	JUNB	Jun B proto-oncogene
D05	Hs.655559	NM_052972	LRG1	Leucine-rich alpha-2-glycoprotein 1
D06	Hs.632486	NM_021960	MCL1	Myeloid cell leukemia sequence 1 (BCL2-related)
D07	Hs.82906	NM_005373	MPL	Myeloproliferative leukemia virus oncogene
D08	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
D09	Hs.618430	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
D10	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
D11	Hs.122926	NM_000176	NR3C1	Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)
D12	Hs.524760	NM_002534	OAS1	2'-5'-oligoadenylate synthetase 1, 40/46kDa
E01	Hs.248156	NM_020530	OSM	Oncostatin M
E02	Hs.74615	NM_006206	PDGFRA	Platelet-derived growth factor receptor, alpha polypeptide
E03	Hs.162458	NM_016166	PIAS1	Protein inhibitor of activated STAT, 1
E04	Hs.657844	NM_004671	PIAS2	Protein inhibitor of activated STAT, 2
E05	Hs.435761	NM_006099	PIAS3	Protein inhibitor of activated STAT, 3
E06	Hs.735971	NM_000948	PRL	Prolactin
E07	Hs.602914	NM_000949	PRLR	Prolactin receptor
E08	Hs.417549	NM_002827	PTPN1	Protein tyrosine phosphatase, non-receptor type 1
E09	Hs.506852	NM_002834	PTPN11	Protein tyrosine phosphatase, non-receptor type 11

Position	UniGene	GenBank	Symbol	Description
E10	Hs.654514	NM_002838	PTPRC	Protein tyrosine phosphatase, receptor type, C
E11	Hs.15744	NM_015503	SH2B1	SH2B adaptor protein 1
E12	Hs.604588	NM_005900	SMAD1	SMAD family member 1
F01	Hs.705764	NM_005901	SMAD2	SMAD family member 2
F02	Hs.742270	NM_005902	SMAD3	SMAD family member 3
F03	Hs.75862	NM_005359	SMAD4	SMAD family member 4
F04	Hs.167700	NM_005903	SMAD5	SMAD family member 5
F05	Hs.50640	NM_003745	SOCS1	Suppressor of cytokine signaling 1
F06	Hs.594327	NM_003877	SOCS2	Suppressor of cytokine signaling 2
F07	Hs.703620	NM_003955	SOCS3	Suppressor of cytokine signaling 3
F08	Hs.744302	NM_080867	SOCS4	Suppressor of cytokine signaling 4
F09	Hs.468426	NM_144949	SOCS5	Suppressor of cytokine signaling 5
F10	Hs.649191	NM_138473	SP1	Sp1 transcription factor
F11	Hs.502511	NM_003120	SPI1	Spleen focus forming virus (SFFV) proviral integration oncogene spi1
F12	Hs.195659	NM_005417	SRC	V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
G01	Hs.335391	NM_003473	STAM	Signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
G02	Hs.743244	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
G03	Hs.530595	NM_005419	STAT2	Signal transducer and activator of transcription 2, 113kDa
G04	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G05	Hs.735572	NM_003151	STAT4	Signal transducer and activator of transcription 4
G06	Hs.437058	NM_003152	STAT5A	Signal transducer and activator of transcription 5A
G07	Hs.595276	NM_012448	STAT5B	Signal transducer and activator of transcription 5B
G08	Hs.524518	NM_003153	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
G09	Hs.592081	NM_005861	STUB1	STIP1 homology and U-box containing protein 1, E3 ubiquitin protein ligase
G10	Hs.75516	NM_003331	TYK2	Tyrosine kinase 2
G11	Hs.414880	NM_007122	USF1	Upstream transcription factor 1
G12	Hs.603118	NM_003403	YY1	YY1 transcription factor
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.544577	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, 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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