

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse JAK / STAT Signaling Pathway PCR Array

Cat. no. 330231 PAMM-039Y

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

## Description

The Mouse 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 formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

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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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	A2m	Akt1	Bcl2l1	Ccnd1	Cdkn1a	Cebpb	Cebpd	Crk	Crp	Csf1r	Cxcl9	Egfr
<b>B</b>	Epor	F2	Fas	Fcer2a	Fcgr1	Gata3	Gbp2b	Ghr	Ifnar1	Ifng	Ifngr1	Il10ra
<b>C</b>	Il10rb	Il20	Il2ra	Il2rg	Il4	Il4ra	Il6st	Insr	Irf1	Irf9	Isg15	Jak1
<b>D</b>	Jak2	Jak3	Jun	Junb	Lrg1	Mcl1	Mpl	Myc	Nfkb1	Nes2	Nr3c1	Oas1a
<b>E</b>	Osm	Pdgfra	Pias1	Pias2	Prl	Prlr	Ptpn1	Ptpn11	Ptpnc	Spi1	Sh2b1	Sh2b2
<b>F</b>	Smad1	Smad2	Smad3	Smad4	Smad5	Socs1	Socs2	Socs3	Socs4	Socs5	Sp1	Src
<b>G</b>	Statm	Stat1	Stat2	Stat3	Stat4	Stat5a	Stat5b	Stat6	Statub1	Tyk2	Usf1	Yy1
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.30151	NM_175628	A2m	Alpha-2-macroglobulin
A02	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A03	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A04	Mm.273049	NM_007631	Ccnd1	Cyclin D1
A05	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
A06	Mm.439656	NM_009883	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
A07	Mm.347407	NM_007679	Cebpd	CCAAT/enhancer binding protein (C/EBP), delta
A08	Mm.280125	NM_133656	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
A09	Mm.28767	NM_007768	Crp	C-reactive protein, pentraxin-related
A10	Mm.22574	NM_001037859	Csf1r	Colony stimulating factor 1 receptor
A11	Mm.766	NM_008599	Cxcl9	Chemokine (C-X-C motif) ligand 9
A12	Mm.420648	NM_007912	Egfr	Epidermal growth factor receptor
B01	Mm.2653	NM_010149	Epor	Erythropoietin receptor
B02	Mm.89048	NM_010168	F2	Coagulation factor II
B03	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
B04	Mm.1233	NM_013517	Fcer2a	Fc receptor, IgE, low affinity II, alpha polypeptide
B05	Mm.150	NM_010186	Fcgr1	Fc receptor, IgG, high affinity I
B06	Mm.313866	NM_008091	Gata3	GATA binding protein 3
B07	Mm.457978	NM_010259	Gbp2b	Guanylate binding protein 1
B08	Mm.3986	NM_010284	Ghr	Growth hormone receptor
B09	Mm.502	NM_010508	Ifnar1	Interferon (alpha and beta) receptor 1
B10	Mm.240327	NM_008337	Ifng	Interferon gamma
B11	Mm.549	NM_010511	Ifngr1	Interferon gamma receptor 1
B12	Mm.379327	NM_008348	Il10ra	Interleukin 10 receptor, alpha
C01	Mm.4154	NM_008349	Il10rb	Interleukin 10 receptor, beta
C02	Mm.103794	NM_021380	Il20	Interleukin 20
C03	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
C04	Mm.2923	NM_013563	Il2rg	Interleukin 2 receptor, gamma chain
C05	Mm.276360	NM_021283	Il4	Interleukin 4
C06	Mm.233802	NM_001008700	Il4ra	Interleukin 4 receptor, alpha
C07	Mm.4364	NM_010560	Il6st	Interleukin 6 signal transducer
C08	Mm.268003	NM_010568	Insr	Insulin receptor
C09	Mm.105218	NM_008390	Irf1	Interferon regulatory factor 1
C10	Mm.2032	NM_008394	Irf9	Interferon regulatory factor 9
C11	Mm.451527	NM_015783	Isg15	ISG15 ubiquitin-like modifier
C12	Mm.289657	NM_146145	Jak1	Janus kinase 1
D01	Mm.275839	NM_008413	Jak2	Janus kinase 2
D02	Mm.476857	NM_010589	Jak3	Janus kinase 3
D03	Mm.275071	NM_010591	Jun	Jun oncogene
D04	Mm.1167	NM_008416	Junb	Jun-B oncogene
D05	Mm.348025	NM_029796	Lrg1	Leucine-rich alpha-2-glycoprotein 1
D06	Mm.1639	NM_008562	Mcl1	Myeloid cell leukemia sequence 1
D07	Mm.4864	NM_010823	Mpl	Myeloproliferative leukemia virus oncogene
D08	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
D09	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105

Position	UniGene	GenBank	Symbol	Description
D10	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
D11	Mm.129481	NM_008173	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
D12	Mm.14301	NM_145211	Oas1a	2'-5' oligoadenylate synthetase 1A
E01	Mm.131422	NM_001013365	Osm	Oncostatin M
E02	Mm.221403	NM_011058	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
E03	Mm.491651	NM_019663	Pias1	Protein inhibitor of activated STAT 1
E04	Mm.6370	NM_008602	Pias2	Protein inhibitor of activated STAT 2
E05	Mm.1270	NM_011164	Prl	Prolactin
E06	Mm.442446	NM_011169	Prlr	Prolactin receptor
E07	Mm.277916	NM_011201	Ptfn1	Protein tyrosine phosphatase, non-receptor type 1
E08	Mm.8681	NM_011202	Ptfn11	Protein tyrosine phosphatase, non-receptor type 11
E09	Mm.391573	NM_011210	Ptprc	Protein tyrosine phosphatase, receptor type, C
E10	Mm.1302	NM_011355	Spi1	SFFV proviral integration 1
E11	Mm.8538	NM_011363	Sh2b1	SH2B adaptor protein 1
E12	Mm.425294	NM_018825	Sh2b2	SH2B adaptor protein 2
F01	Mm.223717	NM_008539	Smad1	MAD homolog 1 (Drosophila)
F02	Mm.490934	NM_010754	Smad2	MAD homolog 2 (Drosophila)
F03	Mm.7320	NM_016769	Smad3	MAD homolog 3 (Drosophila)
F04	Mm.100399	NM_008540	Smad4	MAD homolog 4 (Drosophila)
F05	Mm.272920	NM_008541	Smad5	MAD homolog 5 (Drosophila)
F06	Mm.130	NM_009896	Socs1	Suppressor of cytokine signaling 1
F07	Mm.490329	NM_007706	Socs2	Suppressor of cytokine signaling 2
F08	Mm.3468	NM_007707	Socs3	Suppressor of cytokine signaling 3
F09	Mm.23957	NM_080843	Socs4	Suppressor of cytokine signaling 4
F10	Mm.126885	NM_019654	Socs5	Suppressor of cytokine signaling 5
F11	Mm.4618	NM_013672	Sp1	Trans-acting transcription factor 1
F12	Mm.22845	NM_009271	Src	Rous sarcoma oncogene
G01	Mm.273174	NM_011484	Stam	Signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
G02	Mm.487336	NM_009283	Stat1	Signal transducer and activator of transcription 1
G03	Mm.471333	NM_019963	Stat2	Signal transducer and activator of transcription 2
G04	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G05	Mm.1550	NM_011487	Stat4	Signal transducer and activator of transcription 4
G06	Mm.277403	NM_011488	Stat5a	Signal transducer and activator of transcription 5A
G07	Mm.34064	NM_011489	Stat5b	Signal transducer and activator of transcription 5B
G08	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
G09	Mm.491120	NM_019719	Stub1	STIP1 homology and U-Box containing protein 1
G10	Mm.450004	NM_018793	Tyk2	Tyrosine kinase 2
G11	Mm.8	NM_009480	Usf1	Upstream transcription factor 1
G12	Mm.458511	NM_009537	Yy1	YY1 transcription factor
H01	Mm.391967	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.304088	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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 qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT <sup>2</sup> SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT <sup>2</sup> SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

\* 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.

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