

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Rat JAK / STAT Signaling Pathway PCR Array

Cat. no. 330231 PARN-039YA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² 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 ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Rat JAK / STAT Signaling Pathway RT² 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 *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² 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. RT² 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 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 (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	A2m	Akt1	Bcl2l1	Ccnd1	Cdkn1a	Cebpb	Cebpd	Crk	Crp	Csf1r	Cxcl9	Egfr
B	Epor	F2	Fas	Fcer2	Fcgr1a	Gata3	Gbp1	Ghr	Grb2	Ifnar1	Ifng	Ifngr1
C	Il10ra	Il10rb	Il20	Il2ra	Il2rg	Il4	Il4r	Il6st	Insr	Irf1	Irf9	Isg15
D	Jak1	Jak2	Jak3	Jun	Junb	Lrg1	Mcl1	Mpl	Myc	Nfkb1	Nos2	Nr3c1
E	Osm	Pdgfra	Pias1	Pias2	Prl	Prlr	Ptpn1	Ptpn11	Ptpnc	Sh2b1	Sirpa	Smad1
F	Smad2	Smad3	Smad4	Smad5	Socs1	Socs2	Socs3	Socs4	Socs5	Sp1	Spi1	Src
G	Statm	Stat1	Stat2	Stat3	Stat4	Stat5a	Stat5b	Stat6	Statb1	Tyk2	Usf1	Yy1
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.225884	NM_012488	A2m	Alpha-2-macroglobulin
A02	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A03	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A04	Rn.22279	NM_171992	Ccnd1	Cyclin D1
A05	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
A06	Rn.6479	NM_024125	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
A07	Rn.202620	NM_013154	Cebpd	CCAAT/enhancer binding protein (C/EBP), delta
A08	Rn.96136	NM_019302	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
A09	Rn.16463	NM_017096	Crp	C-reactive protein, pentraxin-related
A10	Rn.72599	NM_001029901	Csf1r	Colony stimulating factor 1 receptor
A11	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
A12	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
B01	Rn.22394	NM_017002	Epor	Erythropoietin receptor
B02	Rn.54498	NM_022924	F2	Coagulation factor II (thrombin)
B03	Rn.162521	NM_139194	Fas	Fas (TNF receptor superfamily, member 6)
B04	Rn.10326	NM_133550	Fcer2	Fc fragment of IgE, low affinity II, receptor for (CD23)
B05	Rn.16643	NM_001100836	Fcgr1a	Fc fragment of IgG, high affinity Ia, receptor (CD64)
B06	Rn.229174	NM_133293	Gata3	GATA binding protein 3
B07	N/A	XM_006224278	Gbp1	Guanylate binding protein 1, interferon-inducible
B08	Rn.2178	NM_017094	Ghr	Growth hormone receptor
B09	Rn.3360	NM_030846	Grb2	Growth factor receptor bound protein 2
B10	Rn.105738	NM_001105893	Ifnar1	Interferon (alpha, beta and omega) receptor 1
B11	Rn.10795	NM_138880	Ifng	Interferon gamma
B12	Rn.19927	NM_053783	Ifngr1	Interferon gamma receptor 1
C01	Rn.27718	NM_057193	Il10ra	Interleukin 10 receptor, alpha
C02	Rn.22261	NM_001107111	Il10rb	Interleukin 10 receptor, beta
C03	Rn.222008	NM_001143881	Il20	Interleukin 20
C04	Rn.9872	NM_013163	Il2ra	Interleukin 2 receptor, alpha
C05	Rn.14508	NM_080889	Il2rg	Interleukin 2 receptor, gamma
C06	Rn.108255	NM_201270	Il4	Interleukin 4
C07	Rn.10471	NM_133380	Il4r	Interleukin 4 receptor, alpha
C08	Rn.12138	NM_001008725	Il6st	Interleukin 6 signal transducer
C09	Rn.9876	NM_017071	Insr	Insulin receptor
C10	Rn.6396	NM_012591	Irf1	Interferon regulatory factor 1
C11	Rn.163277	NM_001012041	Irf9	Interferon regulatory factor 9
C12	Rn.198318	NM_001106700	Isg15	ISG15 ubiquitin-like modifier
D01	Rn.90191	NM_053466	Jak1	Janus kinase 1
D02	Rn.18909	NM_031514	Jak2	Janus kinase 2
D03	Rn.11159	NM_012855	Jak3	Janus kinase 3
D04	Rn.93714	NM_021835	Jun	Jun oncogene
D05	Rn.15806	NM_021836	Junb	Jun B proto-oncogene
D06	Rn.17847	NM_001009717	Lrg1	Leucine-rich alpha-2-glycoprotein 1
D07	Rn.161889	NM_021846	Mcl1	Myeloid cell leukemia sequence 1
D08	Rn.198731	XM_345572	Mpl	Myeloproliferative leukemia virus oncogene
D09	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene

Position	UniGene	GenBank	Symbol	Description
D10	Rn.2411	NM_001276711	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
D11	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
D12	Rn.90070	NM_012576	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
E01	Rn.127158	NM_001006961	Osm	Oncostatin M
E02	Rn.55127	NM_012802	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
E03	Rn.24369	NM_001106829	Pias1	Protein inhibitor of activated STAT, 1
E04	Rn.227054	NM_053337	Pias2	Protein inhibitor of activated STAT, 2
E05	Rn.9759	NM_012629	Prl	Prolactin
E06	Rn.9757	NM_012630	Prlr	Prolactin receptor
E07	Rn.11317	NM_012637	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
E08	Rn.98209	NM_013088	Ptpn11	Protein tyrosine phosphatase, non-receptor type 11
E09	Rn.90166	NM_001109887	Ptprc	Protein tyrosine phosphatase, receptor type, C
E10	Rn.11069	NM_134456	Sh2b1	SH2B adaptor protein 1
E11	Rn.53971	NM_013016	Sirpa	Signal-regulatory protein alpha
E12	Rn.10635	NM_013130	Smad1	SMAD family member 1
F01	Rn.2755	NM_019191	Smad2	SMAD family member 2
F02	Rn.10636	NM_013095	Smad3	SMAD family member 3
F03	Rn.9774	NM_019275	Smad4	SMAD family member 4
F04	Rn.146857	NM_021692	Smad5	SMAD family member 5
F05	Rn.82754	NM_145879	Socs1	Suppressor of cytokine signaling 1
F06	Rn.205056	NM_058208	Socs2	Suppressor of cytokine signaling 2
F07	Rn.127801	NM_053565	Socs3	Suppressor of cytokine signaling 3
F08	Rn.62929	NM_001107256	Socs4	Suppressor of cytokine signaling 4
F09	Rn.47568	NM_001109274	Socs5	Suppressor of cytokine signaling 5
F10	Rn.44609	NM_012655	Sp1	Sp1 transcription factor
F11	Rn.230674	NM_001005892	Spi1	Spleen focus forming virus (SFFV) proviral integration oncogene spi1
F12	Rn.112600	NM_031977	Src	V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
G01	Rn.162251	NM_001109121	Stam	Signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
G02	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G03	Rn.24237	NM_001011905	Stat2	Signal transducer and activator of transcription 2
G04	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G05	Rn.137580	NM_001012226	Stat4	Signal transducer and activator of transcription 4
G06	Rn.228580	NM_017064	Stat5a	Signal transducer and activator of transcription 5A
G07	Rn.54486	NM_022380	Stat5b	Signal transducer and activator of transcription 5B
G08	Rn.6880	NM_001044250	Stat6	Signal transducer and activator of transcription 6
G09	Rn.6504	NM_001025625	Stub1	STIP1 homology and U-Box containing protein 1
G10	Rn.38688	NM_001257347	Tyk2	Tyrosine kinase 2
G11	Rn.10845	NM_031777	Usf1	Upstream transcription factor 1
G12	Rn.162877	NM_173290	Yy1	YY1 transcription factor
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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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 ² 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 ² 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.

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.

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