

RT² Profiler PCR Array (Rotor-Gene® Format)

Pig T Helper Cell Differentiation

Cat. no. 330231 PASS-503ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Pig T Helper Cell Differentiation RT² Profiler™ PCR Array profiles the expression of 84 key genes regulating the commitment of precursor T cells to differentiate into specific effector subtypes. The two more well-known and characterized T helper cell subtypes, Th1 and Th2 cells, mediate cellular and humoral immune responses. Many published research studies find that one subtype population and its immune response tends to dominate in immune disorders such as allergy, asthma, autoimmunity, diabetes, hypersensitivity, and rheumatoid arthritis. The genes represented by this array include cytokines, cytokine receptors, transcription factors, and other signaling molecules regulating differentiation into Th1 or Th2 cells as well as specific markers for these subtypes. Profiling your research RNA samples from T cell population sources will help you correlate sub-type specific gene expression with experimentally-induced cellular or humoral immune responses. The results of this array can also help you provide insights into the molecular mechanisms and biological pathways behind T helper cell lineage commitment decisions in your model system. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes involved in T helper cell differentiation 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 cyclers (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
1	N/A	XM_003135084	CACNA1F	Calcium channel, voltage-dependent, L type, alpha 1F subunit
2	Ssc.22030	NM_001129946	CCL5	Chemokine (C-C motif) ligand 5
3	Ssc.19054	NM_001001620	CCR3	Chemokine (C-C motif) receptor 3
4	Ssc.33610	XM_003361791	CCR4	Chemokine (C-C motif) receptor 4
5	Ssc.26328	NM_001001618	CCR5	Chemokine (C-C motif) receptor 5
6	N/A	XM_013992405	CCR6	Chemokine (C-C motif) receptor 6
7	Ssc.32416	NM_001199889	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
8	Ssc.97869	XM_003355051	CHD7	Chromodomain helicase DNA binding protein 7
9	Ssc.45624	XM_003135179	CXCR3	C-X-C chemokine receptor type 3-like
10	Ssc.15870	NM_213806	FASLG	Fas ligand (TNF superfamily, member 6)
11	Ssc.3391	XM_003122519	FOSL1	Fos-related antigen 1-like
12	Ssc.42780	NM_001128438	FOXP3	Forkhead box P3
13	Ssc.21354	NM_001044567	GATA3	GATA binding protein 3
14	Ssc.54237	NM_214293	GATA4	GATA binding protein 4
15	Ssc.45715	XM_003134109	HAVCR2	Hepatitis A virus cellular receptor 2-like
16	Ssc.383	NM_213792	HOPX	HOP homeobox
17	Ssc.100927	NM_001244338	HOXA10	Homeobox protein Hox-A10-like
18	N/A	XM_003134850	HOXA11	Homeobox protein Hox-A11-like
19	Ssc.25144	XM_005673301	HOXA3	Homeobox A3
20	Ssc.15392	NM_001044546	ICOS	Inducible T-cell co-stimulator
21	Ssc.14914	NM_001037965	ID2	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
22	Ssc.4093	NM_213948	IFNG	Interferon-gamma
23	Ssc.48309	NM_001243387	IGSF6	Immunoglobulin superfamily, member 6
24	N/A	XM_013984460	IKZF2	IKAROS family zinc finger 2 (Helios)
25	Ssc.148	NM_214041	IL10	Interleukin 10
26	Ssc.71	NM_214013	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
27	Ssc.15791	NM_214097	IL12RB2	Interleukin 12 receptor, beta 2
28	Ssc.15877	NM_213803	IL13	Interleukin 13
29	Ssc.17245	NM_214341	IL13RA1	Interleukin 13 receptor, alpha 1
30	Ssc.42770	NM_001005729	IL17A	Interleukin 17A
31	N/A	XM_001926148	IL17RE	Interleukin 17 receptor E
32	Ssc.20	NM_213997	IL18	Interleukin 18 (interferon-gamma-inducing factor)
33	Ssc.15792	NM_214098	IL18R1	Interleukin-18 receptor alpha chain
34	Ssc.77058	XM_005662356	IL18RAP	Interleukin 18 receptor accessory protein
35	Ssc.83020	NM_001243363	IL1R2	Interleukin 1 receptor, type II
36	Ssc.69825	XM_013995913	IL1RL1	Interleukin 1 receptor-like 1
37	Ssc.16224	NM_213861	IL2	Interleukin 2
38	Ssc.26323	NM_214415	IL21	Interleukin 21

Position	UniGene	GenBank	Symbol	Description
39	Ssc.14476	NM_213835	IL2RA	Interleukin 2 receptor, alpha
40	Ssc.15837	NM_214123	IL4	Interleukin 4
41	Ssc.17244	NM_214340	IL4R	Interleukin 4 receptor
42	Ssc.528	NM_214205	IL5	Interleukin 5
43	Ssc.62	NM_214399	IL6	Interleukin 6 (interferon, beta 2)
44	Ssc.16374	NM_214403	IL6R	Interleukin 6 receptor
45	Ssc.51687	NM_001166043	IL9	Interleukin 9
46	Ssc.19494	NM_001097413	IRF1	Interferon regulatory factor 1
47	Ssc.100473	NM_001253352	IRF4	Interferon regulatory factor 4
48	Ssc.98195	NM_001252427	IRF8	Interferon regulatory factor 8
49	Ssc.328	NM_214114	JAK1	Janus kinase 1
50	N/A	XM_003128056	KIF2C	Kinesin family member 2C
51	N/A	XM_013978393	ASB2	Ankyrin repeat and SOCS box protein 2
52	Ssc.76359	XM_001928154	LOC100156637	RAR-related orphan receptor A
53	Ssc.45703	XM_003130453	LOC100520045	Fas apoptotic inhibitory molecule 3-like
54	N/A	XM_003130713	LOC100520325	Zinc finger E-box binding homeobox 1
55	N/A	XM_003129671	LRRC32	Leucine rich repeat containing 32
56	N/A	XM_013998162	MAF	V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog
57	N/A	XM_001928926	MYB	V-myb myeloblastosis viral oncogene homolog (avian)
58	Ssc.16122	NM_001113452	NFATC2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
59	Ssc.51216	NM_001244522	NFATC2IP	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacting protein
60	Ssc.761	NM_214247	NR4A3	Neuron-derived orphan receptor-1 alfa
61	N/A	XM_013992242	PCGF2	Polycomb group ring finger 2
62	Ssc.30602	NM_001245979	PKD2	Polycystic kidney disease 2 (autosomal dominant)
63	Ssc.14475	NM_214379	PPARG	Peroxisome proliferator-activated receptor gamma
64	Ssc.49976	XM_003122669	PTGDR2	Putative G-protein coupled receptor 44-like
65	Ssc.102284	XM_005662527	REL	V-rel avian reticuloendotheliosis viral oncogene homolog
66	N/A	XM_013992304	RELB	V-rel avian reticuloendotheliosis viral oncogene homolog B
67	Ssc.6014	XM_003355171	RORC	RAR-related orphan receptor C
68	Ssc.58373	NM_001246252	RUNX1	Runt-related transcription factor 1
69	Ssc.26216	NM_001204768	SOC51	Suppressor of cytokine signaling 1
70	Ssc.28813	NM_001162890	SOC55	Suppressor of cytokine signaling 5
71	Ssc.42622	NM_213769	STAT1	Signal transducer and activator of transcription 1, 91kDa
72	Ssc.15914	NM_001197305	STAT4	Signal transducer and activator of transcription 4
73	Ssc.10289	NM_001197306	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
74	Ssc.23504	XM_003131530	TBX21	T-box transcription factor TBX21-like
75	Ssc.6354	NM_001244288	TGIF1	TGFB-induced factor homeobox 1
76	Ssc.19703	NM_001113039	TLR4	Toll-like receptor 4
77	Ssc.22011	NM_213760	TLR6	Toll-like receptor 6
78	Ssc.100	NM_214022	TNF	Tumor necrosis factor

Position	UniGene	GenBank	Symbol	Description
79	Ssc.79213	NM_001267073	TNFRSF9	Tumor necrosis factor receptor superfamily member 9-like
80	Ssc.51820	XM_001925694	TNFSF11	Soluble RANKL
81	Ssc.98260	XM_005663081	TOX	Thymocyte selection-associated high mobility group box
82	N/A	XM_001925224	TP53INP1	Tumor protein p53-inducible nuclear protein 1-like
83	Ssc.437	NM_214143	UTS2	Urotensin 2
84	N/A	XM_005663342	ZBTB7B	Zinc finger and BTB domain containing 7B
85	Ssc.10316	XM_003124280	ACTB	Actin, beta
86	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin
87	Ssc.16135	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
88	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1
89	Ssc.27927	NM_001244068	RPL13A	Ribosomal protein L13a
90	N/A	SA_00133	SGDC	Pig Genomic DNA Contamination
91	N/A	SA_00104	RTC	Reverse Transcription Control
92	N/A	SA_00104	RTC	Reverse Transcription Control
93	N/A	SA_00104	RTC	Reverse Transcription Control
94	N/A	SA_00103	PPC	Positive PCR Control
95	N/A	SA_00103	PPC	Positive PCR Control
96	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 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.

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