

RT² Profiler PCR Array (Rotor-Gene® Format)

Cow T Cell Anergy and Immune Tolerance

Cat. no. 330231 PABT-074ZR

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 Cow T Cell Anergy and Immune Tolerance RT² Profiler™ PCR Array profiles the expression of 84 key genes involved in T-cell anergy and immune tolerance. T-cells' functional unresponsiveness, termed anergy, is a cell-intrinsic mechanism that contributes to peripheral self-tolerance. This array contains T-cell and B-cell regulators, cytokines and receptors, TNF superfamily members and their receptors, and transcriptional factors. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes involved in T-cell anergy and immune tolerance 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_005201353	BTLA	B and T lymphocyte associated
2	Bt.53081	NM_001205923	CBLB	Cas-Br-M (murine) ecotropic retroviral transforming sequence b
3	Bt.9974	NM_174511	CCL3	Chemokine (C-C motif) ligand 3
4	Bt.29981	NM_001100293	CCR4	Chemokine (C-C motif) receptor 4
5	Bt.16237	NM_001082434	CD27	CD27 molecule
6	Bt.101480	NM_001163412	CD274	CD274 molecule
7	Bt.48	NM_181004	CD28	CD28 molecule
8	Bt.42498	NM_001105611	CD40	CD40 molecule, TNF receptor superfamily member 5
9	Bt.49	NM_174624	CD40LG	CD40 ligand
10	N/A	XM_002688908	CD70	CD70 molecule
11	Bt.21444	NM_001014934	CDK2	Cyclin-dependent kinase 2
12	Bt.4661	NM_001037594	CDK4	Cyclin-dependent kinase 4
13	Bt.366	NM_174026	CSF1	Colony stimulating factor 1 (macrophage)
14	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
15	Bt.19143	NM_174297	CTLA4	Cytotoxic T-lymphocyte-associated protein 4
16	Bt.103018	NM_001077860	DGKA	Diacylglycerol kinase, alpha 80kDa
17	Bt.62093	NM_001278652	DGKZ	Diacylglycerol kinase, zeta
18	N/A	XM_002698852	EGR2	Early growth response 2 protein-like
19	N/A	NM_001289818	EGR3	Early growth response 3
20	Bt.56198	NM_001191188	EOMES	Eomesodermin
21	Bt.4345	NM_174662	FAS	Fas (TNF receptor superfamily, member 6)
22	Bt.28024	NM_001098859	FASLG	Fas ligand
23	Bt.52605	NM_182786	FOS	FBJ murine osteosarcoma viral oncogene homolog
24	Bt.17953	NM_001083689	FOXP1	Forkhead box P1
25	Bt.27586	NM_001205569	FOXP2	Forkhead box P2
26	Bt.59537	NM_001045933	FOXP3	Forkhead box P3
27	Bt.31666	NM_001076804	GATA3	GATA binding protein 3
28	Bt.101478	NM_001205959	GZMK	Granzyme K (granzyme 3; tryptase II)
29	N/A	XM_005198016	HDAC9	Histone deacetylase 9
30	Bt.5372	NM_174348	ICAM1	Intercellular adhesion molecule 1
31	Bt.24712	NM_001034275	ICOS	Inducible T-cell co-stimulator
32	Bt.188	NM_174086	IFNG	Interferon, gamma
33	Bt.4723	NM_174088	IL10	Interleukin 10
34	Bt.24247	NM_001205757	IL10RA	Interleukin 10 receptor, alpha
35	Bt.12928	NM_174089	IL13	Interleukin 13
36	Bt.522	NM_174090	IL15	Interleukin 15
37	Bt.12772	NM_001008412	IL17A	Interleukin 17A
38	Bt.191	NM_174092	IL1A	Interleukin 1, alpha

Position	UniGene	GenBank	Symbol	Description
39	Bt.341	NM_180997	IL2	Interleukin 2
40	Bt.3941	NM_174358	IL2RA	Interleukin 2 receptor, alpha
41	N/A	XM_015463408	IL2RB	Interleukin 2 receptor subunit beta
42	N/A	XM_015467109	IL31	Interleukin 31
43	Bt.423	NM_173921	IL4	Interleukin 4
44	Bt.5	NM_173922	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
45	Bt.3686	NM_173923	IL6	Interleukin 6 (interferon, beta 2)
46	Bt.88409	NM_001205887	IL7R	Interleukin 7 receptor
47	Bt.48844	NM_001035389	ING4	Inhibitor of growth family, member 4
48	Bt.60671	NM_001206162	IRF4	Interferon regulatory factor 4
49	Bt.8905	NM_001082428	ITCH	Itchy E3 ubiquitin protein ligase homolog (mouse)
50	N/A	XM_616068	ITGA1	Integrin, alpha 1
51	Bt.40750	NM_001206534	JAK1	Janus kinase 1
52	N/A	XM_010798159	JAK3	Tyrosine-protein kinase JAK3-like
53	Bt.11159	NM_001077827	JUN	Jun proto-oncogene
54	Bt.26847	NM_001104978	LAT	Linker for activation of T cells
55	Bt.1939	NM_173928	LEP	Leptin
56	Bt.1416	NM_001102341	LGALS3	Lectin, galactoside-binding, soluble, 3
57	N/A	XM_010808051	LOC104968444	Tumor necrosis factor receptor superfamily member 10B-like
58	Bt.37345	NM_001013401	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
59	Bt.25066	NM_001083638	MEF2A	Myocyte enhancer factor 2A
60	Bt.45162	NM_001166615	NFATC1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1
61	Bt.88008	XM_002692357	NFATC2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
62	Bt.54864	NM_001192831	NFATC3	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
63	Bt.60919	NM_001076409	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
64	Bt.46270	NM_001110003	NHLH2	Nescient helix loop helix 2
65	Bt.53527	XM_010810569	NOTCH1	Notch homolog 1, translocation-associated (Drosophila)
66	Bt.3373	NM_001083506	PDCD1	Programmed cell death 1
67	N/A	NM_001292036	PDCD1LG2	Programmed cell death 1 ligand 2
68	Bt.21975	NM_001143735	PRF1	Perforin 1 (pore forming protein)
69	Bt.12762	NM_001166502	PRKCG	Protein kinase C, gamma
70	Bt.12301	NM_174588	PTGER2	Prostaglandin E receptor 2 (subtype EP2), 53kDa
71	Bt.15758	NM_174445	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
72	Bt.29416	NM_001076071	RNF128	Ring finger protein 128
73	Bt.2314	NM_174182	SELL	Selectin L
74	Bt.15334	NM_001012671	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
75	Bt.106674	NM_001205501	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
76	Bt.44725	NM_001192140	TBX21	T-box 21
77	Bt.469	NM_001166068	TGFB1	Transforming growth factor, beta 1
78	Bt.20012	NM_001184950	TNFRSF18	Tumor necrosis factor receptor superfamily, member 18

Position	UniGene	GenBank	Symbol	Description
79	Bt.62153	NM_001099043	TNFRSF4	Tumor necrosis factor receptor superfamily, member 4
80	N/A	XM_002694054	TNFRSF8	Tumor necrosis factor receptor superfamily, member 8
81	Bt.49346	NM_001035336	TNFRSF9	Tumor necrosis factor receptor superfamily, member 9
82	N/A	XM_002684917	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
83	Bt.64160	NM_001101855	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
84	Bt.44261	NM_001025207	TNFSF8	Tumor necrosis factor (ligand) superfamily, member 8
85	Bt.14186	NM_173979	ACTB	Actin, beta
86	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
87	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
88	Bt.22662	NM_001075742	TBP	TATA box binding protein
89	Bt.111451	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
90	N/A	SA_00137	BGDC	Cow 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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