

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

Cow Housekeeping Genes

Cat. no. 330231 PABT-000ZA

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 Cow Housekeeping Genes RT² Profiler PCR Array profiles the expression of 8 identical sets of 12 commonly used housekeeping genes. This array can be easily used to identify genes with a constant level of expression among different experimental conditions for use in normalizing relative gene expression profiling experiment. Housekeeping genes encode proteins that are usually essential for the maintenance of cellular function. Their expression often, but not always, remains constant under most experimental conditions. Some of these genes may be regulated under certain circumstances and may vary with cell type. Using real-time PCR, research studies can easily and reliably analyze the expression of these housekeeping genes among different experimental conditions 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	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
B	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
C	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
D	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
E	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
F	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
G	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ
H	ACTB	B2M	GAPDH	GUSB	H6PD	HMBS	HPRT1	HSP90AB1	PGK1	TBP	UBC	YWHAZ

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Bt.14186	NM_173979	ACTB	Actin, beta
A02	Bt.64557	NM_173893	B2M	Beta-2-microglobulin
A03	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
A04	Bt.62758	NM_001083436	GUSB	Glucuronidase, beta
A05	Bt.58921	XM_002694063	H6PD	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
A06	Bt.21218	NM_001046207	HMBS	Hydroxymethylbilane synthase
A07	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
A08	Bt.64721	NM_001079637	HSP90AB1	Heat shock 90kDa protein 1, beta
A09	Bt.37560	NM_001034299	PGK1	Phosphoglycerate kinase 1
A10	Bt.22662	NM_001075742	TBP	TATA box binding protein
A11	Bt.5070	NM_001206307	UBC	Ubiquitin C
A12	Bt.88043	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
B01	Bt.14186	NM_173979	ACTB	Actin, beta
B02	Bt.64557	NM_173893	B2M	Beta-2-microglobulin
B03	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
B04	Bt.62758	NM_001083436	GUSB	Glucuronidase, beta
B05	Bt.58921	XM_002694063	H6PD	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
B06	Bt.21218	NM_001046207	HMBS	Hydroxymethylbilane synthase
B07	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
B08	Bt.64721	NM_001079637	HSP90AB1	Heat shock 90kDa protein 1, beta
B09	Bt.37560	NM_001034299	PGK1	Phosphoglycerate kinase 1
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B12	Bt.88043	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
C01	Bt.14186	NM_173979	ACTB	Actin, beta
C02	Bt.64557	NM_173893	B2M	Beta-2-microglobulin
C03	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
C04	Bt.62758	NM_001083436	GUSB	Glucuronidase, beta
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D01	Bt.14186	NM_173979	ACTB	Actin, beta
D02	Bt.64557	NM_173893	B2M	Beta-2-microglobulin
D03	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
D04	Bt.62758	NM_001083436	GUSB	Glucuronidase, beta
D05	Bt.58921	XM_002694063	H6PD	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
D06	Bt.21218	NM_001046207	HMBS	Hydroxymethylbilane synthase

Position	UniGene	GenBank	Symbol	Description
D07	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
D08	Bt.64721	NM_001079637	HSP90AB1	Heat shock 90kDa protein 1, beta
D09	Bt.37560	NM_001034299	PGK1	Phosphoglycerate kinase 1
D10	Bt.22662	NM_001075742	TBP	TATA box binding protein
D11	Bt.5070	NM_001206307	UBC	Ubiquitin C
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H11	Bt.5070	NM_001206307	UBC	Ubiquitin C
H12	Bt.88043	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide

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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