

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

## Zebrafish Housekeeping Genes

Cat. no. 330231 PAZF-000ZA

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™



## Description

The Zebrafish Housekeeping Genes RT<sup>2</sup> 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 *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  $-20^{\circ}\text{C}$ .

**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
A	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
B	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
C	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
D	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
E	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
F	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
G	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b
H	acta1b	b2m	gapdh	gusb	hprt1	hsp90ab1	ldha	nono	pgk1	rpl13a	tbp	tfr1b

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

Position	UniGene	GenBank	Symbol	Description
A01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
A02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
A03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
A04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
A05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
A06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
A07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
A08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
A09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
A10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
A11	Dr.117556	NM_200096	tbp	TATA box binding protein
A12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
B01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
B02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
B03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
B04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
B05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
B06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
B07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
B08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
B09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
B10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
B11	Dr.117556	NM_200096	tbp	TATA box binding protein
B12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
C01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
C02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
C03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
C04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
C05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
C06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
C07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
C08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
C09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
C10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
C11	Dr.117556	NM_200096	tbp	TATA box binding protein
C12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
D01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
D02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
D03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
D04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
D05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
D06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
D07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
D08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
D09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1

Position	UniGene	GenBank	Symbol	Description
D10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
D11	Dr.117556	NM_200096	lbp	TATA box binding protein
D12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
E01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
E02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
E03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
E04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
E05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
E06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
E07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
E08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
E09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
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E12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
F01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
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F03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
F04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
F05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
F06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
F07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
F08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
F09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
F10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
F11	Dr.117556	NM_200096	lbp	TATA box binding protein
F12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
G01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
G02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
G03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
G04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
G05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
G06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
G07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
G08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
G09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
G10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
G11	Dr.117556	NM_200096	lbp	TATA box binding protein
G12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b
H01	Dr.47173	NM_214784	acta1b	Actin, alpha 1b, skeletal muscle
H02	Dr.51646	NM_001159768	b2m	Beta-2-microglobulin
H03	Dr.35640	NM_001115114	gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Dr.158112	XM_695030	gusb	Glucuronidase, beta
H05	Dr.77915	NM_212986	hprt1	Hypoxanthine phosphoribosyltransferase 1
H06	Dr.35688	NM_131310	hsp90ab1	Heat shock protein 90, alpha (cytosolic), class B member 1
H07	Dr.4212	NM_131246	ldha	Lactate dehydrogenase A4
H08	Dr.150274	NM_201579	nono	Non-POU domain containing, octamer-binding
H09	Dr.76033	NM_213387	pgk1	Phosphoglycerate kinase 1
H10	Dr.32450	NM_212784	rpl13a	Ribosomal protein L13a
H11	Dr.117556	NM_200096	lbp	TATA box binding protein
H12	Dr.79613	NM_001009918	tfr1b	Transferrin receptor 1b

## 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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