

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

Fruit Fly Signal Transduction PathwayFinder

Cat. no. 330231 PADM-014ZA

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 Fruit Fly Signal Transduction PathwayFinder RT² Profiler PCR Array profiles the expression of 84 key genes responsive to signal transduction pathway activation or inhibition. Cellular signaling forms a complex network of gene interactions involving multiple signal transduction pathways. Each pathway ultimately increases or decreases the expression of its target genes resulting in alteration of cellular processes. Changes in target gene expression suggest signaling pathway activation or inhibition. However, gene expression results in the same pathway vary widely, depending on model systems and experimental conditions. Therefore, multiple target genes from each pathway should be examined to ensure accurate signaling pathway identification in a variety of model systems. In addition, analyzing multiple pathways simultaneously tests for signaling pathway crosstalk. This array includes target genes for 12 commonly studied signal transduction pathways in fruit fly, including pathways important for developmental, metabolic, and stress-activated processes. Results obtained with this array can suggest pathways that are potentially activated or inhibited by an experimental stimulus for further follow-up studies. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in cellular signaling 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	arr	ato	AtfA	AtfB	AtfC	AtfD	Axn	bnl	brk	byn	cact	cathD
B	CG10899	CG10924	CG2107	CG3961	CG8630	Csp	CycD	CycE	CycG	Cyp4e1	dally	Def
C	DI_Delta	dm	dpp	Drs	Ef1alpha48D	ex	Fatp	fj	fkf	fng	Fs	fz
D	Galpha73B	Gclm	Glut1	grn	GstD1	h	hb	Hey	hkb	Hsc70-1	Hsp27	iHog
E	Impl3	Ir76a	Keap1	kibra	mdy	mirr	Mik	mus209	N	net	nmo	Odc1
F	Odc2	os	p53	pan	Plk1C	plc	ref(2)P	rept	slmb	smo	Socs36E	spi
G	Igo	th	tlf	Trx-2	Tsp66E	Ubx	upd2	upd3	vn	wg	Wnt4	Wnt5
H	Act42A	Gapdh1	Rpl32	SdhA	Tbp	DGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Dm.1842	NM_079998	arr	Arrow
A02	Dm.5307	NM_169213	ato	Atonal
A03	Dm.3981	NM_079021	AtfA	Attacin-A
A04	Dm.30918	NM_079022	AtfB	Attacin-B
A05	Dm.2579	NM_079005	AtfC	Attacin-C
A06	Dm.2406	NM_079667	AtfD	Attacin-D
A07	Dm.7154	NM_170457	Axn	Axin
A08	Dm.2390	NM_169874	bnl	Branchless
A09	Dm.4389	NM_078514	brk	Brinker
A10	Dm.27127	NM_079307	byn	Brachyenteron
A11	Dm.2150	NM_057594	cact	Cactus
A12	Dm.3355	NM_143756	cathD	CG1548 gene product from transcript CG1548-RA
B01	Dm.13355	NM_143041	CG10899	CG10899 gene product from transcript CG10899-RA
B02	Dm.6399	NM_001103897	CG10924	CG10924 gene product from transcript CG10924-RA
B03	Dm.11618	NM_139499	CG2107	CG2107 gene product from transcript CG2107-RA
B04	Dm.3546	NM_140810	CG3961	CG3961 gene product from transcript CG3961-RC
B05	Dm.13697	NM_169500	CG8630	CG8630 gene product from transcript CG8630-RA
B06	Dm.5140	NM_079489	Csp	Cysteine string protein
B07	Dm.2096	NM_078631	CycD	Cyclin D
B08	Dm.3509	NM_057611	CycE	Cyclin E
B09	Dm.1390	NM_079870	CycG	Cyclin G
B10	Dm.30895	NM_080032	Cyp4e1	Cytochrome P450-4e1
B11	Dm.2277	NM_079259	dally	Division abnormally delayed
B12	Dm.29454	NM_078948	Def	Defensin
C01	Dm.7687	NM_057916	DI_Delta	Delta
C02	Dm.4239	NM_080323	dm	Diminutive
C03	Dm.4767	NM_057963	dpp	Decapentaplegic
C04	Dm.14479	NM_079177	Drs	Drosomycin
C05	Dm.29457	NM_058027	Ef1alpha48D	Elongation factor 1alpha48D
C06	Dm.247	NM_057492	ex	Expanded
C07	Dm.1849	NM_079984	Fatp	Fatty acid (long chain) transport protein
C08	Dm.4763	NM_058135	fj	Four-jointed
C09	Dm.22561	NM_079818	fkf	Fork head
C10	Dm.4336	NM_079467	fng	Fringe
C11	Dm.19933	NM_144119	Fs	Follistatin
C12	Dm.1456	NM_080073	fz	Frizzled
D01	Dm.2534	NM_079394	Galpha73B	G protein alpha 73B
D02	Dm.36873	NM_170034	Gclm	Glutamate-cysteine ligase modifier subunit
D03	Dm.4347	NM_001103997	Glut1	Glucose transporter 1
D04	Dm.5963	NM_169206	grn	Grain
D05	Dm.2439	NM_001038953	GstD1	Glutathione S transferase D1
D06	Dm.2554	NM_001014577	h	Hairy
D07	Dm.1105	NM_169233	hb	Hunchback
D08	Dm.516	NM_078933	Hey	Hairy/E(spl)-related with YRPW motif
D09	Dm.2495	NM_079497	hkb	Huckebein

Position	UniGene	GenBank	Symbol	Description
D10	Dm.1176	NM_079339	Hsc70-1	Heat shock protein cognate 1
D11	Dm.2803	NM_079276	Hsp27	Heat shock protein 27
D12	Dm.11441	NM_135241	iHog	Interference Hedgehog
E01	Dm.1468	NM_057233	ImplL3	Ecdysone-inducible gene L3
E02	Dm.1002	NM_140891	lr76a	CG42584 gene product from transcript CG42584-RE
E03	Dm.1228	NM_142337	Keap1	CG3962 gene product from transcript CG3962-RC
E04	Dm.16870	NM_001038966	kibra	Kibra ortholog
E05	Dm.5403	NM_135969	mdy	Midway
E06	Dm.2975	NM_079323	mirr	Mirror
E07	Dm.19934	NM_079028	Mtk	Metchnikowin
E08	Dm.4751	NM_057557	mus209	Mutagen-sensitive 209
E09	Dm.4702	NM_057511	N	Notch
E10	Dm.1799	NM_080081	net	CG11450 gene product from transcript CG11450-RB
E11	Dm.3990	NM_079243	nmo	Nemo
E12	Dm.3665	NM_057704	Odc1	Ornithine decarboxylase 1
F01	Dm.5265	NM_057705	Odc2	Ornithine decarboxylase 2
F02	Dm.1668	NM_001103545	os	Outstretched
F03	Dm.3257	NM_206544	p53	CG33336 gene product from transcript CG33336-RB
F04	Dm.17803	NM_001014685	pan	Pangolin
F05	Dm.7033	NM_080382	Pk61C	Protein kinase 61C
F06	Dm.2630	NM_078937	ptc	Patched
F07	Dm.12210	NM_001014491	ref(2)P	Refractory to sigma P
F08	Dm.7319	NM_079432	rept	Reptin
F09	Dm.2387	NM_079706	slmb	Supernumerary limbs
F10	Dm.244	NM_078719	smo	Smoothened
F11	Dm.5707	NM_078869	Socs36E	Suppressor of cytokine signaling at 36E
F12	Dm.4573	NM_001032110	spi	Spitz
G01	Dm.3376	NM_169254	tgo	Tango
G02	Dm.6466	NM_079377	th	Thread
G03	Dm.1906	NM_079857	tlil	Tailless
G04	Dm.2664	NM_078802	Trx-2	Thioredoxin-2
G05	Dm.2645	NM_079261	Tsp66E	Tetraspanin 66E
G06	Dm.21668	NM_080500	Ubx	Ultrabithorax
G07	Dm.26661	NM_133049	upd2	Unpaired 2
G08	Dm.26662	NM_001103544	upd3	Unpaired 3
G09	Dm.2441	NM_001014565	vn	Vein
G10	Dm.6628	NM_078778	wg	Wingless
G11	Dm.341	NM_057624	Wnt4	Wnt oncogene analog 4
G12	Dm.5375	NM_057576	Wnt5	Wnt oncogene analog 5
H01	Dm.7040	NM_078901	Act42A	Actin 42A
H02	Dm.23224	NM_001038847	Gapdh1	Glyceraldehyde 3 phosphate dehydrogenase 1
H03	Dm.7621	NM_079843	RpL32	Ribosomal protein L32
H04	Dm.4591	NM_057862	SdhA	Succinate dehydrogenase A
H05	Dm.4490	NM_079081	Tbp	TATA binding protein
H06	N/A fly	SA_00146	DGDC	Fly 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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