

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

## Mouse Cell Motility

Cat. no. 330231 PAMM-128ZA

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 Mouse Cell Motility RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 key genes involved in the movement of cells. Many cell types rely on cellular movement for important biological processes such as development, as well as infection and injury response. Stimuli such as growth factor release induce specific cells to migrate, requiring actin cytoskeleton mobilization. The actin cytoskeleton, regulated by the Rho small GTPase family, initially forms cellular projections to mediate either the forward movement of a cell or the development of mature cellular processes (e.g. axons). Cells use adhesion proteins to maintain forward progress, from the rolling migration of a leukocyte along the blood vessel endothelium to the mesenchymal movement of a fibroblast along the extracellular matrix. This array contains growth factors and receptors important for chemotaxis, genes involved in Rho family signaling and adhesion, and genes encoding components of various cellular projections. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in cell motility 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
<b>A</b>	2900073G15 Rik	Actn1	Actn3	Actn4	Actr2	Actr3	Akt1	Arf6	Arhgdia	Arhgef7	Baiap2	Bcar1
<b>B</b>	Capn1	Capn2	Cav1	Cdc42	Cfl1	Crk	Csf1	Ctn	Diap1	Dpp4	Egf	Egfr
<b>C</b>	Enah	Ezr	Fap	Fgf2	Hgf	Igf1	Igf1r	Ilk	Itga4	Itgb1	Itgb2	Itgb3
<b>D</b>	Limk1	Mapk1	Met	Mmp14	Mmp2	Mmp9	Msn	Myh10	Myh9	Myk	Pak1	Pak4
<b>E</b>	Pfn1	Pik3ca	Plaur	Plcg1	Pld1	Prkca	Pten	Plk2	Plk2b	Ptpn1	Pxn	Rac1
<b>F</b>	Rac2	Rasa1	Rdx	Rho	Rhoa	Rheb	Rhoc	Rnd3	Rock1	Sh3pxd2a	Src	Stat3
<b>G</b>	Svil	Tgfb1	Timp2	Tln1	Vasp	Vcl	Vegfa	Vim	Wasf1	Wasf2	Wasl	Wipf1
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

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

Position	UniGene	GenBank	Symbol	Description
A01	Mm.261329	NM_026064	2900073G15 Rik	RIKEN cDNA 2900073G15 gene
A02	Mm.253564	NM_134156	Actn1	Actinin, alpha 1
A03	Mm.5316	NM_013456	Actn3	Actinin alpha 3
A04	Mm.81144	NM_021895	Actn4	Actinin alpha 4
A05	Mm.259045	NM_146243	Actr2	ARP2 actin-related protein 2 homolog (yeast)
A06	Mm.183102	NM_023735	Actr3	ARP3 actin-related protein 3 homolog (yeast)
A07	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A08	Mm.27308	NM_007481	Arf6	ADP-ribosylation factor 6
A09	Mm.30016	NM_133796	Arhgdia	Rho GDP dissociation inhibitor (GDI) alpha
A10	Mm.244068	NM_017402	Arhgef7	Rho guanine nucleotide exchange factor (GEF7)
A11	Mm.197534	NM_130862	Baiap2	Brain-specific angiogenesis inhibitor 1-associated protein 2
A12	Mm.3758	NM_009954	Bcar1	Breast cancer anti-estrogen resistance 1
B01	Mm.6221	NM_007600	Capn1	Calpain 1
B02	Mm.19306	NM_009794	Capn2	Calpain 2
B03	Mm.28278	NM_007616	Cav1	Caveolin 1, caveolae protein
B04	Mm.1022	NM_009861	Cdc42	Cell division cycle 42 homolog (S. cerevisiae)
B05	Mm.329655	NM_007687	Cfl1	Cofilin 1, non-muscle
B06	Mm.280125	NM_133656	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
B07	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B08	Mm.205601	NM_007803	Ctn	Cortactin
B09	Mm.195916	NM_007858	Diap1	Diaphanous homolog 1 (Drosophila)
B10	Mm.1151	NM_010074	Dpp4	Dipeptidylpeptidase 4
B11	Mm.252481	NM_010113	Egf	Epidermal growth factor
B12	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
C01	Mm.87759	NM_010135	Enah	Enabled homolog (Drosophila)
C02	Mm.277812	NM_009510	Ezr	Ezrin
C03	Mm.41816	NM_007986	Fap	Fibroblast activation protein
C04	Mm.473689	NM_008006	Fgf2	Fibroblast growth factor 2
C05	Mm.267078	NM_010427	Hgf	Hepatocyte growth factor
C06	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
C07	Mm.275742	NM_010513	Igf1r	Insulin-like growth factor I receptor
C08	Mm.274846	NM_010562	Ilk	Integrin linked kinase
C09	Mm.31903	NM_010576	Itga4	Integrin alpha 4
C10	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
C11	Mm.1137	NM_008404	Itgb2	Integrin beta 2
C12	Mm.87150	NM_016780	Itgb3	Integrin beta 3
D01	Mm.15409	NM_010717	Limk1	LIM-domain containing, protein kinase
D02	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
D03	Mm.86844	NM_008591	Met	Met proto-oncogene
D04	Mm.280175	NM_008608	Mmp14	Matrix metalloproteinase 14 (membrane-inserted)
D05	Mm.29564	NM_008610	Mmp2	Matrix metalloproteinase 2
D06	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9

Position	UniGene	GenBank	Symbol	Description
D07	Mm.138876	NM_010833	Msn	Moesin
D08	Mm.218233	NM_175260	Myh10	Myosin, heavy polypeptide 10, non-muscle
D09	Mm.29677	NM_022410	Myh9	Myosin, heavy polypeptide 9, non-muscle
D10	Mm.33360	NM_139300	Mylk	Myosin, light polypeptide kinase
D11	Mm.260227	NM_011035	Pak1	P21 protein (Cdc42/Rac)-activated kinase 1
D12	Mm.21876	NM_027470	Pak4	P21 protein (Cdc42/Rac)-activated kinase 4
E01	Mm.2647	NM_011072	Pfn1	Profilin 1
E02	Mm.260521	NM_008839	Pik3ca	Phosphatidylinositol 3-kinase, catalytic, alpha polypeptide
E03	Mm.1359	NM_011113	Plaur	Plasminogen activator, urokinase receptor
E04	Mm.44463	NM_021280	Plcg1	Phospholipase C, gamma 1
E05	Mm.212039	NM_008875	Pld1	Phospholipase D1
E06	Mm.222178	NM_011101	Prkca	Protein kinase C, alpha
E07	Mm.245395	NM_008960	Pten	Phosphatase and tensin homolog
E08	Mm.254494	NM_007982	Plk2	PTK2 protein tyrosine kinase 2
E09	Mm.21613	NM_172498	Plk2b	PTK2 protein tyrosine kinase 2 beta
E10	Mm.277916	NM_011201	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
E11	Mm.18714	NM_011223	Pxn	Paxillin
E12	Mm.292510	NM_009007	Rac1	RAS-related C3 botulinum substrate 1
F01	Mm.1972	NM_009008	Rac2	RAS-related C3 botulinum substrate 2
F02	Mm.259653	NM_145452	Rasa1	RAS p21 protein activator 1
F03	Mm.245746	NM_009041	Rdx	Radixin
F04	Mm.2965	NM_145383	Rho	Rhodopsin
F05	Mm.757	NM_016802	Rhoa	Ras homolog gene family, member A
F06	Mm.687	NM_007483	Rhob	Ras homolog gene family, member B
F07	Mm.262	NM_007484	Rhoc	Ras homolog gene family, member C
F08	Mm.46497	NM_028810	Rnd3	Rho family GTPase 3
F09	Mm.6710	NM_009071	Rock1	Rho-associated coiled-coil containing protein kinase 1
F10	Mm.297461	NM_008018	Sh3pxd2a	SH3 and PX domains 2A
F11	Mm.22845	NM_009271	Src	Rous sarcoma oncogene
F12	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G01	Mm.136791	NM_153153	Svil	Supervillin
G02	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G03	Mm.206505	NM_011594	Timp2	Tissue inhibitor of metalloproteinase 2
G04	Mm.208601	NM_011602	Tln1	Talin 1
G05	Mm.9684	NM_009499	Vasp	Vasodilator-stimulated phosphoprotein
G06	Mm.279361	NM_009502	Vcl	Vinculin
G07	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G08	Mm.268000	NM_011701	Vim	Vimentin
G09	Mm.41353	NM_031877	Wasf1	WASP family 1
G10	Mm.23566	NM_153423	Wasf2	WASP protein family, member 2
G11	Mm.1574	NM_028459	Wasl	Wiskott-Aldrich syndrome-like (human)
G12	Mm.223504	NM_153138	Wipf1	WAS/WASL interacting protein family, member 1
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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, 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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