

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

Mouse Cytoskeleton Regulators

Cat. no. 330231 PAMM-088ZA

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 Mouse Cytoskeleton Regulators RT² Profiler PCR Array profiles the expression of 84 genes controlling the intracellular scaffolding's biogenesis, organization, polymerization, and depolymerization. The actin filaments (or microfilaments), intermediate filaments, and microtubules that comprise the cytoskeleton all share many regulatory mechanisms but each have unique functions. Microfilaments regulate cell motility, migration, size and shape via projections such as axons, dendrites, filopodia, growth cones, lamellipodia, microvilli, pseudopodia, and ruffles. Actin filaments also contribute to cell-cell and cell-matrix junctions, cytokinesis, cytoplasmic streaming, and muscle contraction. Intermediate filaments seem to not only share roles with microfilaments, but also arrange the three-dimensional cell structure by anchoring organelles in place. The dynamics of microtubules, the core component of mitotic spindles and the axonemes of eukaryotic cilia and flagella, control both vesicular transport and chromosomal segregation during cell division. The cytoskeletal regulatory genes represented by this array include calmodulin and calcineurin, kinases and phosphatases, and relevant ARF and RHO G-protein family members as well as their key regulatory factors. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes that regulate cytoskeleton dynamics 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	<i>Acr2</i>	<i>Acr3</i>	<i>Arap1</i>	<i>Arfp2</i>	<i>Arhgap6</i>	<i>Arhgd1b</i>	<i>Arhgef11</i>	<i>Arpc1b</i>	<i>Arpc2</i>	<i>Arpc3</i>	<i>Arpc4</i>	<i>Arpc5</i>
B	<i>Aurka</i>	<i>Aurkb</i>	<i>Aurkc</i>	<i>Baiap2</i>	<i>Cald1</i>	<i>Calm1</i>	<i>Cask</i>	<i>Ccna1</i>	<i>Ccnb2</i>	<i>Cdc42</i>	<i>Cdc42bpa</i>	<i>Cdc42ep2</i>
C	<i>Cdc42ep3</i>	<i>Cdk5</i>	<i>Cdk5r1</i>	<i>Cfl1</i>	<i>Cit</i>	<i>Clasp1</i>	<i>Clasp2</i>	<i>Clip1</i>	<i>Clip2</i>	<i>Crk</i>	<i>Ctn</i>	<i>Cyfp1</i>
D	<i>Cyfp2</i>	<i>Diap1</i>	<i>Dstn</i>	<i>Ezr</i>	<i>Fnbp11</i>	<i>Fscn2</i>	<i>Gsn</i>	<i>Iqgap1</i>	<i>Iqgap2</i>	<i>Limk1</i>	<i>Limk2</i>	<i>Lig1</i>
E	<i>Macf1</i>	<i>Map3k11</i>	<i>Mapk13</i>	<i>Mapre1</i>	<i>Mapre2</i>	<i>Mapt</i>	<i>Mark2</i>	<i>Mid1</i>	<i>Msn</i>	<i>Mtap4</i>	<i>Mylk</i>	<i>Mylk2</i>
F	<i>Nck1</i>	<i>Nck2</i>	<i>Pak1</i>	<i>Pak4</i>	<i>Pfn2</i>	<i>Phldb2</i>	<i>Pikfyve</i>	<i>Ppp1r12a</i>	<i>Ppp1r12b</i>	<i>Ppp3ca</i>	<i>Ppp3cb</i>	<i>Rac1</i>
G	<i>Racgap1</i>	<i>Rdx</i>	<i>Rhoa</i>	<i>Rock1</i>	<i>Ssh1</i>	<i>Ssh2</i>	<i>Stmn1</i>	<i>Tiam1</i>	<i>Vasp</i>	<i>Was</i>	<i>Wasf1</i>	<i>Wasl</i>
H	<i>Acrb</i>	<i>B2m</i>	<i>Gapdh</i>	<i>Gusb</i>	<i>Hsp90ab1</i>	<i>MGDC</i>	<i>RTC</i>	<i>RTC</i>	<i>RTC</i>	<i>PPC</i>	<i>PPC</i>	<i>PPC</i>

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.259045	NM_146243	<i>Acr2</i>	ARP2 actin-related protein 2 homolog (yeast)
A02	Mm.183102	NM_023735	<i>Acr3</i>	ARP3 actin-related protein 3 homolog (yeast)
A03	Mm.277687	NM_027180	<i>Arap1</i>	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1
A04	Mm.41637	NM_029802	<i>Arfp2</i>	ADP-ribosylation factor interacting protein 2
A05	Mm.441810	NM_009707	<i>Arhgap6</i>	Rho GTPase activating protein 6
A06	Mm.2241	NM_007486	<i>Arhgd1b</i>	Rho, GDP dissociation inhibitor (GDI) beta
A07	Mm.287267	NM_001003912	<i>Arhgef11</i>	Rho guanine nucleotide exchange factor (GEF) 11
A08	Mm.30010	NM_023142	<i>Arpc1b</i>	Actin related protein 2/3 complex, subunit 1B
A09	Mm.337038	NM_029711	<i>Arpc2</i>	Actin related protein 2/3 complex, subunit 2
A10	Mm.275942	NM_019824	<i>Arpc3</i>	Actin related protein 2/3 complex, subunit 3
A11	Mm.289306	NM_026552	<i>Arpc4</i>	Actin related protein 2/3 complex, subunit 4
A12	Mm.288974	NM_026369	<i>Arpc5</i>	Actin related protein 2/3 complex, subunit 5
B01	Mm.249363	NM_011497	<i>Aurka</i>	Aurora kinase A
B02	Mm.3488	NM_011496	<i>Aurkb</i>	Aurora kinase B
B03	Mm.261572	NM_020572	<i>Aurkc</i>	Aurora kinase C
B04	Mm.197534	NM_130862	<i>Baiap2</i>	Brain-specific angiogenesis inhibitor 1-associated protein 2
B05	Mm.308134	NM_145575	<i>Cald1</i>	Caldesmon 1
B06	Mm.285993	NM_009790	<i>Calm1</i>	Calmodulin 1
B07	Mm.327591	NM_009806	<i>Cask</i>	Calcium/calmodulin-dependent serine protein kinase (MAGUK family)
B08	Mm.4815	NM_007628	<i>Ccna1</i>	Cyclin A1
B09	Mm.22592	NM_007630	<i>Ccnb2</i>	Cyclin B2
B10	Mm.1022	NM_009861	<i>Cdc42</i>	Cell division cycle 42 homolog (<i>S. cerevisiae</i>)
B11	Mm.259655	NM_001033285	<i>Cdc42bpa</i>	Cdc42 binding protein kinase alpha
B12	Mm.195932	NM_026772	<i>Cdc42ep2</i>	CDC42 effector protein (Rho GTPase binding) 2
C01	Mm.140601	NM_026514	<i>Cdc42ep3</i>	CDC42 effector protein (Rho GTPase binding) 3
C02	Mm.298798	NM_007668	<i>Cdk5</i>	Cyclin-dependent kinase 5
C03	Mm.142275	NM_009871	<i>Cdk5r1</i>	Cyclin-dependent kinase 5, regulatory subunit 1 (p35)
C04	Mm.329655	NM_007687	<i>Cfl1</i>	Cofilin 1, non-muscle
C05	Mm.8321	NM_007708	<i>Cit</i>	Citron
C06	Mm.138740	NM_001081276	<i>Clasp1</i>	CLIP associating protein 1
C07	Mm.222272	NM_029633	<i>Clasp2</i>	CLIP associating protein 2
C08	Mm.241109	NM_019765	<i>Clip1</i>	CAP-GLY domain containing linker protein 1
C09	Mm.255138	NM_009990	<i>Clip2</i>	CAP-GLY domain containing linker protein 2
C10	Mm.280125	NM_133656	<i>Crk</i>	V-crk sarcoma virus CT10 oncogene homolog (avian)
C11	Mm.205601	NM_007803	<i>Ctn</i>	Cortactin
C12	Mm.37249	NM_011370	<i>Cyfp1</i>	Cytoplasmic FMR1 interacting protein 1
D01	Mm.154358	NM_133769	<i>Cyfp2</i>	Cytoplasmic FMR1 interacting protein 2
D02	Mm.195916	NM_007858	<i>Diap1</i>	Diaphanous homolog 1 (<i>Drosophila</i>)
D03	Mm.28919	NM_019771	<i>Dstn</i>	Destrin
D04	Mm.277812	NM_009510	<i>Ezr</i>	Ezrin
D05	Mm.209491	NM_153118	<i>Fnbp11</i>	Formin binding protein 1-like
D06	Mm.481403	NM_172802	<i>Fscn2</i>	Fascin homolog 2, actin-bundling protein, retinal (<i>Strongylocentrotus purpuratus</i>)
D07	Mm.21109	NM_146120	<i>Gsn</i>	Gelsolin
D08	Mm.207619	NM_016721	<i>Iqgap1</i>	IQ motif containing GTPase activating protein 1
D09	Mm.38878	NM_027711	<i>Iqgap2</i>	IQ motif containing GTPase activating protein 2

Position	UniGene	GenBank	Symbol	Description
D10	Mm.15409	NM_010717	Limk1	LIM-domain containing, protein kinase
D11	Mm.124176	NM_010718	Limk2	LIM motif-containing protein kinase 2
D12	Mm.285453	NM_008502	Lgl1	Lethal giant larvae homolog 1 (Drosophila)
E01	Mm.402299	NM_001199136	Macf1	Microtubule-actin crosslinking factor 1
E02	Mm.185026	NM_022012	Map3k11	Mitogen-activated protein kinase kinase kinase 11
E03	Mm.27970	NM_011950	Mapk13	Mitogen-activated protein kinase 13
E04	Mm.143877	NM_007896	Mapre1	Microtubule-associated protein, RP/EB family, member 1
E05	Mm.132237	NM_153058	Mapre2	Microtubule-associated protein, RP/EB family, member 2
E06	Mm.1287	NM_010838	Mapt	Microtubule-associated protein tau
E07	Mm.258986	NM_007928	Mark2	MAP/microtubule affinity-regulating kinase 2
E08	Mm.34441	NM_010797	Mid1	Midline 1
E09	Mm.138876	NM_010833	Msn	Moesin
E10	Mm.217318	NM_008633	Mtap4	Microtubule-associated protein 4
E11	Mm.33360	NM_139300	Mylk	Myosin, light polypeptide kinase
E12	Mm.250604	NM_001081044	Mylk2	Myosin, light polypeptide kinase 2, skeletal muscle
F01	Mm.181485	NM_010878	Nck1	Non-catalytic region of tyrosine kinase adaptor protein 1
F02	Mm.389903	NM_010879	Nck2	Non-catalytic region of tyrosine kinase adaptor protein 2
F03	Mm.260227	NM_011035	Pak1	P21 protein (Cdc42/Rac)-activated kinase 1
F04	Mm.21876	NM_027470	Pak4	P21 protein (Cdc42/Rac)-activated kinase 4
F05	Mm.271744	NM_019410	Pfn2	Profilin 2
F06	Mm.211477	NM_153412	Phldb2	Pleckstrin homology-like domain, family B, member 2
F07	Mm.38370	NM_011086	Pikfyve	Phosphoinositide kinase, FYVE finger containing
F08	Mm.422959	NM_027892	Ppp1r12a	Protein phosphatase 1, regulatory (inhibitor) subunit 12A
F09	Mm.188709	NM_001081307	Ppp1r12b	Protein phosphatase 1, regulatory (inhibitor) subunit 12B
F10	Mm.331389	NM_008913	Ppp3ca	Protein phosphatase 3, catalytic subunit, alpha isoform
F11	Mm.274432	NM_008914	Ppp3cb	Protein phosphatase 3, catalytic subunit, beta isoform
F12	Mm.292510	NM_009007	Rac1	RAS-related C3 botulinum substrate 1
G01	Mm.273804	NM_012025	Racgap1	Rac GTPase-activating protein 1
G02	Mm.245746	NM_009041	Rdx	Radixin
G03	Mm.757	NM_016802	Rhoa	Ras homolog gene family, member A
G04	Mm.6710	NM_009071	Rock1	Rho-associated coiled-coil containing protein kinase 1
G05	Mm.389682	NM_198109	Ssh1	Slingshot homolog 1 (Drosophila)
G06	Mm.440381	NM_177710	Ssh2	Slingshot homolog 2 (Drosophila)
G07	Mm.378957	NM_019641	Simn1	Stathmin 1
G08	Mm.124100	NM_009384	Tiam1	T-cell lymphoma invasion and metastasis 1
G09	Mm.9684	NM_009499	Vasp	Vasodilator-stimulated phosphoprotein
G10	Mm.4735	NM_009515	Was	Wiskott-Aldrich syndrome homolog (human)
G11	Mm.41353	NM_031877	Wasf1	WASP family 1
G12	Mm.1574	NM_028459	Wasl	Wiskott-Aldrich syndrome-like (human)
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, 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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