RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Cytoskeleton Regulators

Cat. no. 330231 PAMM-088ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

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*.

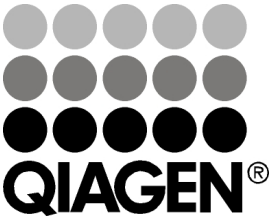
Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.259045	NM_146243	Actr2	ARP2 actin-related protein 2 homolog (yeast)
A02	Mm.183102	NM_023735	Actr3	ARP3 actin-related protein 3 homolog (yeast)
A03	Mm.277687	NM_027180	Arap1	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 1
A04	Mm.41637	NM_029802	Arfip2	ADP-ribosylation factor interacting protein 2
A05	Mm.441810	NM_009707	Arhgap6	Rho GTPase activating protein 6
A06	Mm.2241	NM_007486	Arhgdib	Rho, GDP dissociation inhibitor (GDI) beta
A07	Mm.287267	NM_001003912	Arhgef11	Rho guanine nucleotide exchange factor (GEF) 11
A08	Mm.30010	NM_023142	Arpc1b	Actin related protein 2/3 complex, subunit 1B
A09	Mm.337038	NM_029711	Arpc2	Actin related protein 2/3 complex, subunit 2
A10	Mm.275942	NM_019824	Arpc3	Actin related protein 2/3 complex, subunit 3
A11	Mm.289306	NM_026552	Arpc4	Actin related protein 2/3 complex, subunit 4
A12	Mm.288974	NM_026369	Arpc5	Actin related protein 2/3 complex, subunit 5
B01	Mm.249363	NM_011497	Aurka	Aurora kinase A
B02	Mm.3488	NM_011496	Aurkb	Aurora kinase B
B03	Mm.261572	NM_020572	Aurkc	Aurora kinase C
B04	Mm.197534	NM_130862	Baiap2	Brain-specific angiogenesis inhibitor 1-associated protein 2
B05	Mm.308134	NM_145575	Cald1	Caldesmon 1
B06	Mm.285993	NM_009790	Calm1	Calmodulin 1
B07	Mm.327591	NM_009806	Cask	Calcium/calmodulin-dependent serine protein kinase (MAGUK family)
B08	Mm.4815	NM_007628	Ccna1	Cyclin A1
B09	Mm.22592	NM_007630	Ccnb2	Cyclin B2
B10	Mm.1022	NM_009861	Cdc42	Cell division cycle 42 homolog (S. cerevisiae)
B11	Mm.259655	NM_001033285	Cdc42bpa	Cdc42 binding protein kinase alpha
B12	Mm.195932	NM_026772	Cdc42ep2	CDC42 effector protein (Rho GTPase binding) 2
C01	Mm.140601	NM_026514	Cdc42ep3	CDC42 effector protein (Rho GTPase binding) 3
C02	Mm.298798	NM_007668	Cdk5	Cyclin-dependent kinase 5
C03	Mm.142275	NM_009871	Cdk5r1	Cyclin-dependent kinase 5, regulatory subunit 1 (p35)
C04	Mm.329655	NM_007687	Cfl1	Cofilin 1, non-muscle
C05	Mm.8321	NM_007708	Cit	Citron
C06	Mm.138740	NM_001081276	Clasp1	CLIP associating protein 1
C07	Mm.222272	NM_029633	Clasp2	CLIP associating protein 2
C08	Mm.241109	NM_019765	Clip1	CAP-GLY domain containing linker protein 1
C09	Mm.255138	NM_009990	Clip2	CAP-GLY domain containing linker protein 2
C10	Mm.280125	NM_133656	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
C11	Mm.205601	NM_007803	Cttn	Cortactin
C12	Mm.37249	NM_011370	Cyfip1	Cytoplasmic FMR1 interacting protein 1
D01	Mm.154358	NM_133769	Cyfip2	Cytoplasmic FMR1 interacting protein 2
D02	Mm.195916	NM_007858	Diap1	Diaphanous homolog 1 (Drosophila)
D03	Mm.28919	NM_019771	Dstn	Destrin
D04	Mm.277812	NM_009510	Ezr	Ezrin
D05	Mm.209491	NM_153118	Fnbp1l	Formin binding protein 1-like
D06	Mm.481403	NM_172802	Fscn2	Fascin homolog 2, actin-bundling protein, retinal (Strongylocentrotus purpuratus)
D07	Mm.21109	NM_146120	Gsn	Gelsolin
D08	Mm.207619	NM_016721	Iqgap1	IQ motif containing GTPase activating protein 1
D09	Mm.38878	NM_027711	Iqgap2	IQ motif containing GTPase activating protein 2
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	Llgl1	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

Position	UniGene	GenBank	Symbol	Description
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	Stmn1	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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² SYBR Green ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

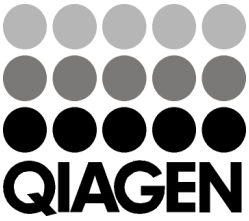
* Larger kit sizes available; please inquire.

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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

www.qiagen.com

Australia ▪ 1-800-243-800
Austria ▪ 0800/281010
Belgium ▪ 0800-79612
Brazil ▪ 0800-557779
Canada ▪ 800-572-9613
China ▪ 8621-3865-3865
Denmark ▪ 80-885945
Finland ▪ 0800-914416
France ▪ 01-60-920-930
Germany ▪ 02103-29-12000
Hong Kong ▪ 800 933 965
Ireland ▪ 1800 555 049
Italy ▪ 800-787980
Japan ▪ 03-6890-7300
Korea (South) ▪ 080-000-7145
Luxembourg ▪ 8002 2076
Mexico ▪ 01-800-7742-436
The Netherlands ▪ 0800 0229592
Norway ▪ 800-18859
Singapore ▪ 1800-742-4368
Spain ▪ 91-630-7050
Sweden ▪ 020-790282
Switzerland ▪ 055-254-22-11
UK ▪ 01293-422-911
USA ▪ 800-426-8157



Sample & Assay Technologies