RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse MAP Kinase Signaling Pathway

Cat. no. 330231 PAMM-061ZR

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 MAP Kinase Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to the MAP kinase (MAPK) signaling pathway. Members of the MKKK, MKK, and MAPK families are represented on this array. Transcription factors and genes whose expression is induced by MAP kinase signaling are included as well. Raf regulating proteins and MEKK1 interacting proteins are found on this array along with cell cycle proteins regulated by the Erk1/2 pathway. Genes related to scaffolding and anchoring are also included. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the MAPK signaling pathway 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.220946	NM_009703	Araf	V-raf murine sarcoma 3611 viral oncogene homolog
A02	Mm.209903	NM_009715	Atf2	Activating transcription factor 2
A03	Mm.4815	NM_007628	Ccna1	Cyclin A1
A04	Mm.4189	NM_009828	Ccna2	Cyclin A2
A05	Mm.260114	NM_172301	Ccnb1	Cyclin B1
A06	Mm.22592	NM_007630	Ccnb2	Cyclin B2
A07	Mm.273049	NM_007631	Ccnd1	Cyclin D1
A08	Mm.333406	NM_009829	Ccnd2	Cyclin D2
A09	Mm.246520	NM_007632	Ccnd3	Cyclin D3
A10	Mm.16110	NM_007633	Ccne1	Cyclin E1
A11	Mm.1022	NM_009861	Cdc42	Cell division cycle 42 homolog (S. cerevisiae)
A12	Mm.111326	NM_016756	Cdk2	Cyclin-dependent kinase 2
B01	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4
B02	Mm.31672	NM_009873	Cdk6	Cyclin-dependent kinase 6
B03	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B04	Mm.2958	NM_009875	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
B05	Mm.168789	NM_009876	Cdkn1c	Cyclin-dependent kinase inhibitor 1C (P57)
B06	Mm.4733	NM_009877	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
B07	Mm.423094	NM_007670	Cdkn2b	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B08	Mm.1912	NM_007671	Cdkn2c	Cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
B09	Mm.29020	NM_009878	Cdkn2d	Cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4)
B10	Mm.3996	NM_007700	Chuk	Conserved helix-loop-helix ubiquitous kinase
B11	Mm.277735	NM_007742	Col1a1	Collagen, type I, alpha 1
B12	Mm.453295	NM_133828	Creb1	CAMP responsive element binding protein 1
C01	Mm.132238	NM_001025432	Crebbp	CREB binding protein
C02	Mm.157069	NM_010052	Dlk1	Delta-like 1 homolog (Drosophila)
C03	Mm.18036	NM_007891	E2f1	E2F transcription factor 1
C04	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
C05	Mm.181959	NM_007913	Egr1	Early growth response 1
C06	Mm.405823	NM_007922	Elk1	ELK1, member of ETS oncogene family
C07	Mm.292415	NM_011808	Ets1	E26 avian leukemia oncogene 1, 5' domain
C08	Mm.290207	NM_011809	Ets2	E26 avian leukemia oncogene 2, 3' domain
C09	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C10	Mm.439649	NM_008163	Grb2	Growth factor receptor bound protein 2
C11	Mm.334313	NM_008284	Hras1	Harvey rat sarcoma virus oncogene 1
C12	Mm.330160	NM_022310	Hspa5	Heat shock protein 5
D01	Mm.13849	NM_013560	Hspb1	Heat shock protein 1
D02	Mm.275071	NM_010591	Jun	Jun oncogene
D03	Mm.32074	NM_032397	Kcnn1	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 1
D04	Mm.383182	NM_021284	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D05	Mm.4745	NM_013571	Ksr1	Kinase suppressor of ras 1
D06	Mm.331392	NM_019920	Lamtor3	Late endosomal/lysosomal adaptor, MAPK and MTOR activator 3
D07	Mm.248907	NM_008927	Map2k1	Mitogen-activated protein kinase kinase 1
D08	Mm.275436	NM_023138	Map2k2	Mitogen-activated protein kinase kinase 2
D09	Mm.18494	NM_008928	Map2k3	Mitogen-activated protein kinase kinase 3
D10	Mm.412922	NM_009157	Map2k4	Mitogen-activated protein kinase kinase 4
D11	Mm.325746	NM_011840	Map2k5	Mitogen-activated protein kinase kinase 5
D12	Mm.14487	NM_011943	Map2k6	Mitogen-activated protein kinase kinase 6
E01	Mm.3906	NM_011944	Map2k7	Mitogen-activated protein kinase kinase 7
E02	Mm.15918	NM_011945	Map3k1	Mitogen-activated protein kinase kinase kinase 1
E03	Mm.211762	NM_011946	Map3k2	Mitogen-activated protein kinase kinase kinase 2
E04	Mm.27041	NM_011947	Map3k3	Mitogen-activated protein kinase kinase kinase 3
E05	Mm.28587	NM_011948	Map3k4	Mitogen-activated protein kinase kinase kinase 4
E06	Mm.148278	NM_008279	Map4k1	Mitogen-activated protein kinase kinase kinase kinase 1
E07	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
E08	Mm.39253	NM_009158	Mapk10	Mitogen-activated protein kinase 10

Position	UniGene	GenBank	Symbol	Description
E09	Mm.91969	NM_011161	Mapk11	Mitogen-activated protein kinase 11
E10	Mm.38343	NM_013871	Mapk12	Mitogen-activated protein kinase 12
E11	Mm.27970	NM_011950	Mapk13	Mitogen-activated protein kinase 13
E12	Mm.311337	NM_011951	Mapk14	Mitogen-activated protein kinase 14
F01	Mm.8385	NM_011952	Mapk3	Mitogen-activated protein kinase 3
F02	Mm.480076	NM_015806	Mapk6	Mitogen-activated protein kinase 6
F03	Mm.38172	NM_011841	Mapk7	Mitogen-activated protein kinase 7
F04	Mm.21495	NM_016700	Mapk8	Mitogen-activated protein kinase 8
F05	Mm.2720	NM_011162	Mapk8ip1	Mitogen-activated protein kinase 8 interacting protein 1
F06	Mm.173337	NM_021921	Mapk8ip2	Mitogen-activated protein kinase 8 interacting protein 2
F07	Mm.43081	NM_013931	Mapk8ip3	Mitogen-activated protein kinase 8 interacting protein 3
F08	Mm.68933	NM_016961	Mapk9	Mitogen-activated protein kinase 9
F09	Mm.221235	NM_008551	Mapkapk2	MAP kinase-activated protein kinase 2
F10	Mm.272206	NM_010765	Mapkapk5	MAP kinase-activated protein kinase 5
F11	Mm.268548	NM_008558	Max	Max protein
F12	Mm.24001	NM_025282	Mef2c	Myocyte enhancer factor 2C
G01	Mm.209327	NM_021461	Mknk1	MAP kinase-interacting serine/threonine kinase 1
G02	Mm.459300	NM_020021	Mos	Moloney sarcoma oncogene
G03	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
G04	Mm.27908	NM_023699	Nfatc4	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4
G05	Mm.400954	NM_010937	Nras	Neuroblastoma ras oncogene
G06	Mm.260227	NM_011035	Pak1	P21 protein (Cdc42/Rac)-activated kinase 1
G07	Mm.292510	NM_009007	Rac1	RAS-related C3 botulinum substrate 1
G08	Mm.184163	NM_029780	Raf1	V-raf-leukemia viral oncogene 1
G09	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
G10	Mm.44482	NM_018754	Sfn	Stratifin
G11	Mm.100399	NM_008540	Smad4	MAD homolog 4 (Drosophila)
G12	Mm.222	NM_011640	Trp53	Transformation related protein 53
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.

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