RT² Profiler PCR Array (Rotor-Gene® Format)

Human MAP Kinase Signaling Pathway

Cat. no. 330231 PAHS-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 Human 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	Hs.446641	NM_001654	ARAF	V-raf murine sarcoma 3611 viral oncogene homolog
A02	Hs.592510	NM_001880	ATF2	Activating transcription factor 2
A03	Hs.550061	NM_004333	BRAF	V-raf murine sarcoma viral oncogene homolog B1
A04	Hs.417050	NM_003914	CCNA1	Cyclin A1
A05	Hs.58974	NM_001237	CCNA2	Cyclin A2
A06	Hs.23960	NM_031966	CCNB1	Cyclin B1
A07	Hs.194698	NM_004701	CCNB2	Cyclin B2
A08	Hs.523852	NM_053056	CCND1	Cyclin D1
A09	Hs.376071	NM_001759	CCND2	Cyclin D2
A10	Hs.534307	NM_001760	CCND3	Cyclin D3
A11	Hs.244723	NM_001238	CCNE1	Cyclin E1
A12	Hs.690198	NM_001791	CDC42	Cell division cycle 42 (GTP binding protein, 25kDa)
B01	Hs.19192	NM_001798	CDK2	Cyclin-dependent kinase 2
B02	Hs.95577	NM_000075	CDK4	Cyclin-dependent kinase 4
B03	Hs.119882	NM_001259	CDK6	Cyclin-dependent kinase 6
B04	Hs.370771	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
B05	Hs.238990	NM_004064	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
B06	Hs.106070	NM_000076	CDKN1C	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)
B07	Hs.512599	NM_000077	CDKN2A	Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
B08	Hs.72901	NM_004936	CDKN2B	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B09	Hs.728783	NM_078626	CDKN2C	Cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
B10	Hs.435051	NM_001800	CDKN2D	Cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4)
B11	Hs.198998	NM_001278	CHUK	Conserved helix-loop-helix ubiquitous kinase
B12	Hs.172928	NM_000088	COL1A1	Collagen, type I, alpha 1
C01	Hs.516646	NM_004379	CREB1	CAMP responsive element binding protein 1
C02	Hs.459759	NM_004380	CREBBP	CREB binding protein
C03	Hs.533717	NM_003836	DLK1	Delta-like 1 homolog (Drosophila)
C04	Hs.654393	NM_005225	E2F1	E2F transcription factor 1
C05	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
C06	Hs.326035	NM_001964	EGR1	Early growth response 1
C07	Hs.181128	NM_005229	ELK1	ELK1, member of ETS oncogene family
C08	Hs.369438	NM_005238	ETS1	V-ets erythroblastosis virus E26 oncogene homolog 1 (avian)
C09	Hs.644231	NM_005239	ETS2	V-Ets erythroblastosis virus E26 oncogene homolog 2 (avian)
C10	Hs.728789	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
C11	Hs.444356	NM_002086	GRB2	Growth factor receptor-bound protein 2
C12	Hs.37003	NM_005343	HRAS	V-Ha-ras Harvey rat sarcoma viral oncogene homolog
D01	Hs.716396	NM_005347	HSPA5	Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)
D02	Hs.520973	NM_001540	HSPB1	Heat shock 27kDa protein 1
D03	Hs.714791	NM_002228	JUN	Jun proto-oncogene
D04	Hs.505033	NM_004985	KRAS	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D05	Hs.133534	NM_014238	KSR1	Kinase suppressor of ras 1
D06	Hs.716375	NM_021970	LAMTOR3	Late endosomal/lysosomal adaptor, MAPK and MTOR activator 3
D07	Hs.145442	NM_002755	MAP2K1	Mitogen-activated protein kinase kinase 1
D08	Hs.465627	NM_030662	MAP2K2	Mitogen-activated protein kinase kinase 2
D09	Hs.514012	NM_002756	MAP2K3	Mitogen-activated protein kinase kinase 3
D10	Hs.514681	NM_003010	MAP2K4	Mitogen-activated protein kinase kinase 4
D11	Hs.114198	NM_002757	MAP2K5	Mitogen-activated protein kinase kinase 5
D12	Hs.463978	NM_002758	MAP2K6	Mitogen-activated protein kinase kinase 6
E01	Hs.531754	NM_145185	MAP2K7	Mitogen-activated protein kinase kinase 7
E02	Hs.657756	NM_005921	MAP3K1	Mitogen-activated protein kinase kinase kinase 1
E03	Hs.145605	NM_006609	MAP3K2	Mitogen-activated protein kinase kinase kinase 2
E04	Hs.29282	NM_002401	MAP3K3	Mitogen-activated protein kinase kinase kinase 3
E05	Hs.390428	NM_005922	MAP3K4	Mitogen-activated protein kinase kinase kinase 4
E06	Hs.95424	NM_007181	MAP4K1	Mitogen-activated protein kinase kinase kinase kinase 1
E07	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
E08	Hs.125503	NM_002753	MAPK10	Mitogen-activated protein kinase 10
E09	Hs.57732	NM_002751	MAPK11	Mitogen-activated protein kinase 11

Position	UniGene	GenBank	Symbol	Description
E10	Hs.432642	NM_002969	MAPK12	Mitogen-activated protein kinase 12
E11	Hs.178695	NM_002754	MAPK13	Mitogen-activated protein kinase 13
E12	Hs.485233	NM_001315	MAPK14	Mitogen-activated protein kinase 14
F01	Hs.861	NM_002746	MAPK3	Mitogen-activated protein kinase 3
F02	Hs.411847	NM_002748	MAPK6	Mitogen-activated protein kinase 6
F03	Hs.150136	NM_002749	MAPK7	Mitogen-activated protein kinase 7
F04	Hs.138211	NM_002750	MAPK8	Mitogen-activated protein kinase 8
F05	Hs.558180	NM_012324	MAPK8IP2	Mitogen-activated protein kinase 8 interacting protein 2
F06	Hs.484371	NM_002752	MAPK9	Mitogen-activated protein kinase 9
F07	Hs.643566	NM_004759	MAPKAPK2	Mitogen-activated protein kinase-activated protein kinase 2
F08	Hs.234521	NM_004635	MAPKAPK3	Mitogen-activated protein kinase-activated protein kinase 3
F09	Hs.285354	NM_002382	MAX	MYC associated factor X
F10	Hs.653394	NM_002397	MEF2C	Myocyte enhancer factor 2C
F11	Hs.371594	NM_003684	MKNK1	MAP kinase interacting serine/threonine kinase 1
F12	Hs.533432	NM_005372	MOS	V-mos Moloney murine sarcoma viral oncogene homolog
G01	Hs.512587	NM_020998	MST1	Macrophage stimulating 1 (hepatocyte growth factor-like)
G02	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
G03	Hs.77810	NM_004554	NFATC4	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4
G04	Hs.486502	NM_002524	NRAS	Neuroblastoma RAS viral (v-ras) oncogene homolog
G05	Hs.435714	NM_002576	PAK1	P21 protein (Cdc42/Rac)-activated kinase 1
G06	Hs.120	NM_004905	PRDX6	Peroxiredoxin 6
G07	Hs.413812	NM_006908	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
G08	Hs.159130	NM_002880	RAF1	V-raf-1 murine leukemia viral oncogene homolog 1
G09	Hs.408528	NM_000321	RB1	Retinoblastoma 1
G10	Hs.523718	NM_006142	SFN	Stratifin
G11	Hs.75862	NM_005359	SMAD4	SMAD family member 4
G12	Hs.654481	NM_000546	TP53	Tumor protein p53
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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