

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

Mouse Oncogenes & Tumor Suppressor Genes

Cat. no. 330231 PAMM-502ZA

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 Oncogenes & Tumor Suppressor Genes RT² Profiler PCR Array profiles the expression of 84 key genes that promote oncogenesis. The genes represented by this array either have oncogenic or tumor suppressor properties or both depending not only on the tumor type, but also on the known or observed differences in gene expression relative to matched normal tissue. Profiling the expression of these genes in your tumor samples may correlate them with biological phenotypes or clinical outcomes like staging, therapy selection, metastasis, recurrence, and survival rate, among others. The results may also provide insights into the molecular mechanisms and biological pathways behind oncogenesis and cancer pathology, including deregulation of apoptosis, cell cycle, cell adhesion, DNA damage & repair, and signal transduction. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in oncogenesis 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	Abl1	Akt1	Apc	Atm	Bax	Bcl2	Bcl2l1	Bcr	Bcrca1	Bcrca2	Casp8	Ccnd1
B	Cdh1	Cdk4	Cdkn1a	Cdkn2a	Cdkn2b	Cdkn3	Ctnnb1	E2f1	Egf	Elk1	ErbB2	Esr1
C	Ets1	Fhit	Fos	Foxd3	Hgf	Hic1	Hras1	Igf2r	Jak2	Jun	Junb	Jund
D	Kit	Kitl	Kras	Mcl1	Mdm2	Men1	Met	Mgmt	Mlh1	Mos	Myb	Myc
E	Mycn	Nf1	Nf2	Nlkbl	Nlkbia	Nras	Pik3c2a	Pik3ca	Pml	Prkca	Raf1	Rara
F	Rassf1	Rb1	Rel	Ret	Ros1	Runx1	Runx3	S100a4	Serpinb5	Sh3pxd2a	Smad4	Src
G	Stat3	Slk11	Tgfb1	Tnf	Trp53	Trp73	Tsc1	Vhl	Vhl1	Wwax	Xrcc1	Zhx2
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.1318	NM_009594	Abl1	C-abl oncogene 1, non-receptor tyrosine kinase
A02	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A03	Mm.384171	NM_007462	Apc	Adenomatosis polyposis coli
A04	Mm.5088	NM_007499	Atm	Ataxia telangiectasia mutated homolog (human)
A05	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A06	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A07	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A08	Mm.333722	NM_001081412	Bcr	Breakpoint cluster region
A09	Mm.244975	NM_009764	Bcrca1	Breast cancer 1
A10	Mm.236256	NM_009765	Bcrca2	Breast cancer 2
A11	Mm.336851	NM_009812	Casp8	Caspase 8
A12	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B01	Mm.35605	NM_009864	Cdh1	Cadherin 1
B02	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4
B03	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B04	Mm.4733	NM_009877	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
B05	Mm.423094	NM_007670	Cdkn2b	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
B06	Mm.272394	NM_028222	Cdkn3	Cyclin-dependent kinase inhibitor 3
B07	Mm.291928	NM_007614	Ctnnb1	Catenin (cadherin associated protein), beta 1
B08	Mm.18036	NM_007891	E2f1	E2F transcription factor 1
B09	Mm.252481	NM_010113	Egf	Epidermal growth factor
B10	Mm.405823	NM_007922	Elk1	ELK1, member of ETS oncogene family
B11	Mm.290822	NM_001003817	ErbB2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B12	Mm.9213	NM_007956	Esr1	Estrogen receptor 1 (alpha)
C01	Mm.292415	NM_011808	Ets1	E26 avian leukemia oncogene 1, 5' domain
C02	Mm.397619	NM_010210	Fhit	Fragile histidine triad gene
C03	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C04	Mm.4758	NM_010425	Foxd3	Forkhead box D3
C05	Mm.267078	NM_010427	Hgf	Hepatocyte growth factor
C06	Mm.57250	NM_010430	Hic1	Hypermethylated in cancer 1
C07	Mm.334313	NM_008284	Hras1	Harvey rat sarcoma virus oncogene 1
C08	Mm.26553	NM_010515	Igf2r	Insulin-like growth factor 2 receptor
C09	Mm.275839	NM_008413	Jak2	Janus kinase 2
C10	Mm.275071	NM_010591	Jun	Jun oncogene
C11	Mm.1167	NM_008416	Junb	Jun-B oncogene
C12	Mm.419851	NM_010592	Jund	Jun proto-oncogene related gene d
D01	Mm.247073	NM_021099	Kit	Kit oncogene
D02	Mm.45124	NM_013598	Kitl	Kit ligand
D03	Mm.383182	NM_021284	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D04	Mm.1639	NM_008562	Mcl1	Myeloid cell leukemia sequence 1
D05	Mm.22670	NM_010786	Mdm2	Transformed mouse 3T3 cell double minute 2
D06	Mm.12917	NM_008583	Men1	Multiple endocrine neoplasia 1
D07	Mm.86844	NM_008591	Met	Met proto-oncogene
D08	Mm.440219	NM_008598	Mgmt	O-6-methylguanine-DNA methyltransferase

Position	UniGene	GenBank	Symbol	Description
D09	Mm.196006	NM_026810	Mlh1	MutL homolog 1 (E. coli)
D10	Mm.459300	NM_020021	Mos	Maloney sarcoma oncogene
D11	Mm.52109	NM_010848	Myb	Myeloblastosis oncogene
D12	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
E01	Mm.16469	NM_008709	Mycn	V-myc myelocytomatosis viral related oncogene, neuroblastoma derived (avian)
E02	Mm.255596	NM_010897	Nf1	Neurofibromatosis 1
E03	Mm.297109	NM_010898	Nf2	Neurofibromatosis 2
E04	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
E05	Mm.170515	NM_010907	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
E06	Mm.400954	NM_010937	Nras	Neuroblastoma ras oncogene
E07	Mm.3810	NM_011083	Pik3c2a	Phosphatidylinositol 3-kinase, C2 domain containing, alpha polypeptide
E08	Mm.260521	NM_008839	Pik3ca	Phosphatidylinositol 3-kinase, catalytic, alpha polypeptide
E09	Mm.392123	NM_008884	Pml	Promyelocytic leukemia
E10	Mm.222178	NM_011101	Prkca	Protein kinase C, alpha
E11	Mm.184163	NM_029780	Raf1	V-raf-leukemia viral oncogene 1
E12	Mm.439744	NM_009024	Rara	Retinoic acid receptor, alpha
F01	Mm.12091	NM_019713	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
F02	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F03	Mm.4869	NM_009044	Rel	Reticuloendotheliosis oncogene
F04	Mm.57199	NM_009050	Ret	Ret proto-oncogene
F05	Mm.236163	NM_011282	Ros1	Ros1 proto-oncogene
F06	Mm.4081	NM_009821	Runx1	Runt related transcription factor 1
F07	Mm.378894	NM_019732	Runx3	Runt related transcription factor 3
F08	Mm.3925	NM_011311	S100a4	S100 calcium binding protein A4
F09	Mm.268618	NM_009257	Serpnb5	Serine (or cysteine) peptidase inhibitor, clade B, member 5
F10	Mm.297461	NM_008018	Sh3pxd2a	SH3 and PX domains 2A
F11	Mm.100399	NM_008540	Smad4	MAD homolog 4 (Drosophila)
F12	Mm.22845	NM_009271	Src	Rous sarcoma oncogene
G01	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G02	Mm.44231	NM_011492	Slk11	Serine/threonine kinase 11
G03	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G04	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G05	Mm.222	NM_011640	Trp53	Transformation related protein 53
G06	Mm.78015	NM_011642	Trp73	Transformation related protein 73
G07	Mm.224354	NM_022887	Tsc1	Tuberous sclerosis 1
G08	Mm.29407	NM_009507	Vhl	Von Hippel-Lindau tumor suppressor
G09	Mm.389339	NM_144783	Wt1	Wilms tumor 1 homolog
G10	Mm.440420	NM_019573	Wwox	WW domain-containing oxidoreductase
G11	Mm.4347	NM_009532	Xrcc1	X-ray repair complementing defective repair in Chinese hamster cells 1
G12	Mm.36557	NM_199449	Zhx2	Zinc fingers and homeoboxes 2
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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