

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

Mouse Cancer Drug Targets

Cat. no. 330231 PAMM-507ZA

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 Cancer Drug Targets RT² Profiler PCR Array profiles the expression of 84 actively sought targets for anticancer therapeutics and drug development. Cancer is a heterogeneous disease with a variety of survival mechanisms resulting from accumulated mutations that alter gene expression. In one of its key roles, cancer research continually identifies novel dysregulated carcinogenesis-related genes elucidating new mechanisms of cancer progression or treatment evasion, and potentially leading to new avenues for drug development. Further research into the expression of these genes may identify how and when they are dysregulated and potentially discover the underlying mechanism(s) behind cancer growth and progression. This array includes genes dysregulated during carcinogenesis, including those involved in key cellular growth pathways such as apoptosis, DNA damage repair, epigenetics, and growth factor and other signaling pathways. Using real-time PCR, your research study 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	Abcc1	Akt1	Akt2	Aif2	Aurka	Aurkb	Aurkc	Bcl2	Birc5	Cdc25a	Cdk1	Cdk2
B	Cdk4	Cdk5	Cdk7	Cdk8	Cdk9	Ctsb	Ctsd	Ctsl	Ctss	Egfr	ErbB2	ErbB3
C	ErbB4	Esr1	Esr2	Figf	Flt1	Flt4	Grb2	Gstp1	Hdac1	Hdac11	Hdac2	Hdac3
D	Hdac4	Hdac6	Hdac7	Hdac8	Hif1a	Hras1	Hsp90aa1	Hsp90b1	Igf1	Igf1r	Igf2	Irf5
E	Kdr	Kit	Kras	Mdm2	Mdm4	Mtor	Nfkb1	Nras	Ntn3	Parp1	Parp2	Parp4
F	Pdgfra	Pdgfrb	Pgr	Pik3c2a	Pik3c3	Pik3ca	Plk1	Plk2	Plk3	Plk4	Prkca	Prkcb
G	Prkcd	Prkce	Ptgs2	Rhoa	Rhob	Tert	Tnks	Top2a	Top2b	Trp53	Txn1	Txnrd1
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.196634	NM_008576	Abcc1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A02	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A03	Mm.177194	NM_007434	Akt2	Thymoma viral proto-oncogene 2
A04	Mm.209903	NM_009715	Aif2	Activating transcription factor 2
A05	Mm.249363	NM_011497	Aurka	Aurora kinase A
A06	Mm.3488	NM_011496	Aurkb	Aurora kinase B
A07	Mm.261572	NM_020572	Aurkc	Aurora kinase C
A08	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A09	Mm.8552	NM_009689	Birc5	Baculoviral IAP repeat-containing 5
A10	Mm.307103	NM_007658	Cdc25a	Cell division cycle 25 homolog A (S. pombe)
A11	Mm.281367	NM_007659	Cdk1	Cyclin-dependent kinase 1
A12	Mm.111326	NM_016756	Cdk2	Cyclin-dependent kinase 2
B01	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4
B02	Mm.298798	NM_007668	Cdk5	Cyclin-dependent kinase 5
B03	Mm.259718	NM_009874	Cdk7	Cyclin-dependent kinase 7
B04	Mm.260576	NM_153599	Cdk8	Cyclin-dependent kinase 8
B05	Mm.27557	NM_130860	Cdk9	Cyclin-dependent kinase 9 (CDC2-related kinase)
B06	Mm.236553	NM_007798	Ctsb	Cathepsin B
B07	Mm.231395	NM_009983	Ctsd	Cathepsin D
B08	Mm.930	NM_009984	Ctsl	Cathepsin L
B09	Mm.3619	NM_021281	Ctss	Cathepsin S
B10	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
B11	Mm.290822	NM_001003817	ErbB2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B12	Mm.373043	NM_010153	ErbB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C01	Mm.442420	NM_010154	ErbB4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
C02	Mm.9213	NM_007956	Esr1	Estrogen receptor 1 (alpha)
C03	Mm.2561	NM_010157	Esr2	Estrogen receptor 2 (beta)
C04	Mm.297978	NM_010216	Figf	C-fos induced growth factor
C05	Mm.389712	NM_010228	Flt1	FMS-like tyrosine kinase 1
C06	Mm.3291	NM_008029	Flt4	FMS-like tyrosine kinase 4
C07	Mm.439649	NM_008163	Grb2	Growth factor receptor bound protein 2
C08	Mm.299292	NM_013541	Gstp1	Glutathione S-transferase, pi 1
C09	Mm.202504	NM_008228	Hdac1	Histone deacetylase 1
C10	Mm.206218	NM_144919	Hdac11	Histone deacetylase 11
C11	Mm.19806	NM_008229	Hdac2	Histone deacetylase 2
C12	Mm.20521	NM_010411	Hdac3	Histone deacetylase 3
D01	Mm.318567	NM_207225	Hdac4	Histone deacetylase 4
D02	Mm.29854	NM_010413	Hdac6	Histone deacetylase 6
D03	Mm.384027	NM_019572	Hdac7	Histone deacetylase 7
D04	Mm.328128	NM_027382	Hdac8	Histone deacetylase 8
D05	Mm.3879	NM_010431	Hif1a	Hypoxia inducible factor 1, alpha subunit
D06	Mm.334313	NM_008284	Hras1	Harvey rat sarcoma virus oncogene 1
D07	Mm.1843	NM_010480	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
D08	Mm.87773	NM_011631	Hsp90b1	Heat shock protein 90, beta (Grp94), member 1

Position	UniGene	GenBank	Symbol	Description
D09	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
D10	Mm.275742	NM_010513	Igf1r	Insulin-like growth factor I receptor
D11	Mm.3862	NM_010514	Igf2	Insulin-like growth factor 2
D12	Mm.6479	NM_012057	Irf5	Interferon regulatory factor 5
E01	Mm.285	NM_010612	Kdr	Kinase insert domain protein receptor
E02	Mm.247073	NM_021099	Kit	Kit oncogene
E03	Mm.383182	NM_021284	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E04	Mm.22670	NM_010786	Mdm2	Transformed mouse 3T3 cell double minute 2
E05	Mm.426531	NM_008575	Mdm4	Transformed mouse 3T3 cell double minute 4
E06	Mm.21158	NM_020009	Mtor	Mechanistic target of rapamycin (serine/threonine kinase)
E07	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
E08	Mm.400954	NM_010937	Nras	Neuroblastoma ras oncogene
E09	Mm.259542	NM_010947	Ntn3	Netrin 3
E10	Mm.277779	NM_007415	Parp1	Poly (ADP-ribose) polymerase family, member 1
E11	Mm.281482	NM_009632	Parp2	Poly (ADP-ribose) polymerase family, member 2
E12	Mm.213013	NM_001145978	Parp4	Poly (ADP-ribose) polymerase family, member 4
F01	Mm.221403	NM_011058	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
F02	Mm.4146	NM_008809	Pdgfrb	Platelet derived growth factor receptor, beta polypeptide
F03	Mm.12798	NM_008829	Pgr	Progesterone receptor
F04	Mm.3810	NM_011083	Pik3c2a	Phosphatidylinositol 3-kinase, C2 domain containing, alpha polypeptide
F05	Mm.194127	NM_181414	Pik3c3	Phosphoinositide-3-kinase, class 3
F06	Mm.260521	NM_008839	Pik3ca	Phosphatidylinositol 3-kinase, catalytic, alpha polypeptide
F07	Mm.16525	NM_011121	Plk1	Polo-like kinase 1 (Drosophila)
F08	Mm.380	NM_152804	Plk2	Polo-like kinase 2 (Drosophila)
F09	Mm.259022	NM_013807	Plk3	Polo-like kinase 3 (Drosophila)
F10	Mm.3794	NM_011495	Plk4	Polo-like kinase 4 (Drosophila)
F11	Mm.222178	NM_011101	Prkca	Protein kinase C, alpha
F12	Mm.207496	NM_008855	Prkcb	Protein kinase C, beta
G01	Mm.2314	NM_011103	Prkcd	Protein kinase C, delta
G02	Mm.24614	NM_011104	Prkce	Protein kinase C, epsilon
G03	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
G04	Mm.757	NM_016802	Rhoa	Ras homolog gene family, member A
G05	Mm.687	NM_007483	Rhob	Ras homolog gene family, member B
G06	Mm.10109	NM_009354	Tert	Telomerase reverse transcriptase
G07	Mm.88364	NM_175091	Tnks	Tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase
G08	Mm.4237	NM_011623	Top2a	Topoisomerase (DNA) II alpha
G09	Mm.130362	NM_009409	Top2b	Topoisomerase (DNA) II beta
G10	Mm.222	NM_011640	Trp53	Transformation related protein 53
G11	Mm.260618	NM_011660	Txn1	Thioredoxin 1
G12	Mm.210155	NM_015762	Txnrd1	Thioredoxin reductase 1
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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