

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

Mouse Cell Cycle

Cat. no. 330231 PAMM-020ZA

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 Cell Cycle RT² Profiler PCR Array profiles the expression of 84 genes key to cell cycle regulation. This array contains genes that both positively and negatively regulate the cell cycle, the transitions between the each of the phases, DNA replication, checkpoints and arrest. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the cell cycle 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	Atm	Atr	Aurka	Aurkb	Bcl2	Birc5	Brca1	Brca2	Casp3	Ccna1	Ccna2
B	Ccnb1	Ccnb2	Ccnc	Ccnd1	Ccnd2	Ccnd3	Ccne1	Ccnf	Cdc20	Cdc25a	Cdc25c	Cdc6
C	Cdc7	Cdk1	Cdk2	Cdk4	Cdk5rap1	Cdk6	Cdkn1a	Cdkn1b	Cdkn2a	Cdkn2b	Cdkn3	Chek1
D	Chek2	Cks1b	Ddi3	Dst	E2f1	E2f2	E2f3	E2f4	Gadd45a	Gpr132	Hus1	Iltgb1
E	Mad2l1	Mcm2	Mcm3	Mcm4	Mdm2	Mki67	Mre11a	Mah2	Myb	Nbn	Nek2	Notch2
F	Plk1	Pmp22	Ppm1d	Rad17	Rad21	Rad51	Rad9	Ran	Rb1	Rbl1	Rbl2	Sfn
G	Shc1	Skp2	Slin1	Smc1a	Stag1	Slmn1	Terf1	Tfdp1	Trp53	Trp63	Tsg101	Wee1
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.5088	NM_007499	Atm	Ataxia telangiectasia mutated homolog (human)
A03	Mm.212462	NM_019864	Atr	Ataxia telangiectasia and rad3 related
A04	Mm.249363	NM_011497	Aurka	Aurora kinase A
A05	Mm.3488	NM_011496	Aurkb	Aurora kinase B
A06	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A07	Mm.8552	NM_009689	Birc5	Baculoviral IAP repeat-containing 5
A08	Mm.244975	NM_009764	Brca1	Breast cancer 1
A09	Mm.236256	NM_009765	Brca2	Breast cancer 2
A10	Mm.34405	NM_009810	Casp3	Caspase 3
A11	Mm.4815	NM_007628	Ccna1	Cyclin A1
A12	Mm.4189	NM_009828	Ccna2	Cyclin A2
B01	Mm.260114	NM_172301	Ccnb1	Cyclin B1
B02	Mm.22592	NM_007630	Ccnb2	Cyclin B2
B03	Mm.278584	NM_016746	Ccnc	Cyclin C
B04	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B05	Mm.333406	NM_009829	Ccnd2	Cyclin D2
B06	Mm.246520	NM_007632	Ccnd3	Cyclin D3
B07	Mm.16110	NM_007633	Ccne1	Cyclin E1
B08	Mm.77695	NM_007634	Ccnf	Cyclin F
B09	Mm.289747	NM_023223	Cdc20	Cell division cycle 20 homolog (S. cerevisiae)
B10	Mm.307103	NM_007658	Cdc25a	Cell division cycle 25 homolog A (S. pombe)
B11	Mm.286602	NM_009860	Cdc25c	Cell division cycle 25 homolog C (S. pombe)
B12	Mm.20912	NM_011799	Cdc6	Cell division cycle 6 homolog (S. cerevisiae)
C01	Mm.20842	NM_009863	Cdc7	Cell division cycle 7 (S. cerevisiae)
C02	Mm.281367	NM_007659	Cdk1	Cyclin-dependent kinase 1
C03	Mm.111326	NM_016756	Cdk2	Cyclin-dependent kinase 2
C04	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4
C05	Mm.289427	NM_025876	Cdk5rap1	CDK5 regulatory subunit associated protein 1
C06	Mm.31672	NM_009873	Cdk6	Cyclin-dependent kinase 6
C07	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
C08	Mm.2958	NM_009875	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
C09	Mm.4733	NM_009877	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
C10	Mm.423094	NM_007670	Cdkn2b	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
C11	Mm.272394	NM_028222	Cdkn3	Cyclin-dependent kinase inhibitor 3
C12	Mm.16753	NM_007691	Chek1	Checkpoint kinase 1 homolog (S. pombe)
D01	Mm.279308	NM_016681	Chek2	CHK2 checkpoint homolog (S. pombe)
D02	Mm.3049	NM_016904	Cks1b	CDC28 protein kinase 1b
D03	Mm.110220	NM_007837	Ddi3	DNA-damage inducible transcript 3
D04	Mm.478284	NM_134448	Dst	Dystonin
D05	Mm.18036	NM_007891	E2f1	E2F transcription factor 1
D06	Mm.307932	NM_177733	E2f2	E2F transcription factor 2
D07	Mm.268356	NM_010093	E2f3	E2F transcription factor 3
D08	Mm.34554	NM_148952	E2f4	E2F transcription factor 4
D09	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha

Position	UniGene	GenBank	Symbol	Description
D10	Mm.20455	NM_019925	Gpr132	G protein-coupled receptor 132
D11	Mm.42201	NM_008316	Hus1	Hus1 homolog (S. pombe)
D12	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
E01	Mm.485053	NM_019499	Mad2l1	MAD2 mitotic arrest deficient-like 1 (yeast)
E02	Mm.16711	NM_008564	Mcm2	Minichromosome maintenance deficient 2 mitotin (S. cerevisiae)
E03	Mm.4502	NM_008563	Mcm3	Minichromosome maintenance deficient 3 (S. cerevisiae)
E04	Mm.1500	NM_008565	Mcm4	Minichromosome maintenance deficient 4 homolog (S. cerevisiae)
E05	Mm.22670	NM_010786	Mdm2	Transformed mouse 3T3 cell double minute 2
E06	Mm.4078	NM_001081117	Mki67	Antigen identified by monoclonal antibody Ki 67
E07	Mm.149071	NM_018736	Mre11a	Meiotic recombination 11 homolog A (S. cerevisiae)
E08	Mm.4619	NM_008628	Msh2	MutS homolog 2 (E. coli)
E09	Mm.52109	NM_010848	Myb	Myeloblastosis oncogene
E10	Mm.20866	NM_013752	Nbn	Nibrin
E11	Mm.33773	NM_010892	Nek2	NIMA (never in mitosis gene a)-related expressed kinase 2
E12	Mm.254017	NM_010928	Notch2	Notch gene homolog 2 (Drosophila)
F01	Mm.290442	NM_013630	Pkd1	Polycystic kidney disease 1 homolog
F02	Mm.1237	NM_008885	Pmp22	Peripheral myelin protein 22
F03	Mm.45609	NM_016910	Ppm1d	Protein phosphatase 1D magnesium-dependent, delta isoform
F04	Mm.248489	NM_011233	Rad17	RAD17 homolog (S. pombe)
F05	Mm.182628	NM_009009	Rad21	RAD21 homolog (S. pombe)
F06	Mm.471596	NM_011234	Rad51	RAD51 homolog (S. cerevisiae)
F07	Mm.277629	NM_011237	Rad9	RAD9 homolog (S. pombe)
F08	Mm.297440	NM_009391	Ran	RAN, member RAS oncogene family
F09	Mm.273862	NM_009029	Rb1	Retinoblastoma 1
F10	Mm.244671	NM_011249	Rbl1	Retinoblastoma-like 1 (p107)
F11	Mm.235580	NM_011250	Rbl2	Retinoblastoma-like 2
F12	Mm.44482	NM_018754	Sfn	Stratifin
G01	Mm.86595	NM_011368	Shc1	Src homology 2 domain-containing transforming protein C1
G02	Mm.35584	NM_013787	Skp2	S-phase kinase-associated protein 2 (p45)
G03	Mm.10948	NM_011407	Slfn1	Schlafen 1
G04	Mm.482095	NM_019710	Smc1a	Structural maintenance of chromosomes 1A
G05	Mm.42135	NM_009282	Stag1	Stromal antigen 1
G06	Mm.378957	NM_019641	Stmn1	Stathmin 1
G07	Mm.4306	NM_009352	Terf1	Telomeric repeat binding factor 1
G08	Mm.925	NM_009361	Tfdp1	Transcription factor Dp 1
G09	Mm.222	NM_011640	Trp53	Transformation related protein 53
G10	Mm.20894	NM_011641	Trp63	Transformation related protein 63
G11	Mm.241334	NM_021884	Tsg101	Tumor susceptibility gene 101
G12	Mm.287173	NM_009516	Wee1	WEE 1 homolog 1 (S. pombe)
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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