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

Human Cell Cycle

Cat. no. 330231 PAHS-020ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human 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	ANAPC2	ATM	ATR	AURKA	AURKB	BCCIP	BCL2	BIRC5	BRCA1	BRCA2	CASP3
B	CCNA2	CCNB1	CCNB2	CCNC	CCND1	CCND2	CCND3	CCNE1	CCNF	CCNG1	CCNG2	CCNH
C	CCNT1	CDC16	CDC20	CDC25A	CDC25C	CDC34	CDC6	CDK1	CDK2	CDK4	CDK5R1	CDK5RAP1
D	CDK6	CDK7	CDK8	CDKN1A	CDKN1B	CDKN2A	CDKN2B	CDKN3	CHEK1	CHEK2	CKS1B	CKS2
E	CUL1	CUL2	CUL3	E2F1	E2F4	GADD45A	GTSE1	HUS1	KNTC1	KPNA2	MAD2L1	MAD2L2
F	MCM2	MCM3	MCM4	MCM5	MDM2	MKI67	MNAT1	MRE11A	NBN	RAD1	RAD17	RAD51
G	RAD9A	RB1	RBBP8	RBL1	RBL2	SERTAD1	SKP2	STMN1	TFDP1	TFDP2	TP53	WEE1
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.431048	NM_005157	ABL1	C-abl oncogene 1, non-receptor tyrosine kinase
A02	Hs.533262	NM_013366	ANAPC2	Anaphase promoting complex subunit 2
A03	Hs.367437	NM_000051	ATM	Ataxia telangiectasia mutated
A04	Hs.271791	NM_001184	ATR	Ataxia telangiectasia and Rad3 related
A05	Hs.250822	NM_003600	AURKA	Aurora kinase A
A06	Hs.442658	NM_004217	AURKB	Aurora kinase B
A07	Hs.370292	NM_016567	BCCIP	BRCA2 and CDKN1A interacting protein
A08	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A09	Hs.728893	NM_001168	BIRC5	Baculoviral IAP repeat containing 5
A10	Hs.194143	NM_007294	BRCA1	Breast cancer 1, early onset
A11	Hs.34012	NM_000059	BRCA2	Breast cancer 2, early onset
A12	Hs.141125	NM_004346	CASP3	Caspase 3, apoptosis-related cysteine peptidase
B01	Hs.58974	NM_001237	CCNA2	Cyclin A2
B02	Hs.23960	NM_031966	CCNB1	Cyclin B1
B03	Hs.194698	NM_004701	CCNB2	Cyclin B2
B04	Hs.430646	NM_005190	CCNC	Cyclin C
B05	Hs.523852	NM_053056	CCND1	Cyclin D1
B06	Hs.376071	NM_001759	CCND2	Cyclin D2
B07	Hs.534307	NM_001760	CCND3	Cyclin D3
B08	Hs.244723	NM_001238	CCNE1	Cyclin E1
B09	Hs.1973	NM_001761	CCNF	Cyclin F
B10	Hs.79101	NM_004060	CCNG1	Cyclin G1
B11	Hs.13291	NM_004354	CCNG2	Cyclin G2
B12	Hs.292524	NM_001239	CCNH	Cyclin H
C01	Hs.279906	NM_001240	CCNT1	Cyclin T1
C02	Hs.374127	NM_003903	CDC16	Cell division cycle 16 homolog (S. cerevisiae)
C03	Hs.524947	NM_001255	CDC20	Cell division cycle 20 homolog (S. cerevisiae)
C04	Hs.437705	NM_001789	CDC25A	Cell division cycle 25 homolog A (S. pombe)
C05	Hs.656	NM_001790	CDC25C	Cell division cycle 25 homolog C (S. pombe)
C06	Hs.514997	NM_004359	CDC34	Cell division cycle 34 homolog (S. cerevisiae)
C07	Hs.405958	NM_001254	CDC6	Cell division cycle 6 homolog (S. cerevisiae)
C08	Hs.334562	NM_001786	CDK1	Cyclin-dependent kinase 1
C09	Hs.19192	NM_001798	CDK2	Cyclin-dependent kinase 2
C10	Hs.95577	NM_000075	CDK4	Cyclin-dependent kinase 4
C11	Hs.500015	NM_003885	CDK5R1	Cyclin-dependent kinase 5, regulatory subunit 1 (p35)
C12	Hs.435952	NM_016408	CDK5RAP1	CDK5 regulatory subunit associated protein 1
D01	Hs.119882	NM_001259	CDK6	Cyclin-dependent kinase 6
D02	Hs.184298	NM_001799	CDK7	Cyclin-dependent kinase 7
D03	Hs.382306	NM_001260	CDK8	Cyclin-dependent kinase 8
D04	Hs.370771	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
D05	Hs.238990	NM_004064	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
D06	Hs.512599	NM_000077	CDKN2A	Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
D07	Hs.72901	NM_004936	CDKN2B	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
D08	Hs.84113	NM_005192	CDKN3	Cyclin-dependent kinase inhibitor 3
D09	Hs.24529	NM_001274	CHEK1	CHK1 checkpoint homolog (S. pombe)

Position	UniGene	GenBank	Symbol	Description
D10	Hs.291363	NM_007194	CHEK2	CHK2 checkpoint homolog (S. pombe)
D11	Hs.374378	NM_001826	CKS1B	CDC28 protein kinase regulatory subunit 1B
D12	Hs.83758	NM_001827	CKS2	CDC28 protein kinase regulatory subunit 2
E01	Hs.146806	NM_003592	CUL1	Cullin 1
E02	Hs.82919	NM_003591	CUL2	Cullin 2
E03	Hs.372286	NM_003590	CUL3	Cullin 3
E04	Hs.654393	NM_005225	E2F1	E2F transcription factor 1
E05	Hs.108371	NM_001950	E2F4	E2F transcription factor 4, p107/p130-binding
E06	Hs.80409	NM_001924	GADD45A	Growth arrest and DNA-damage-inducible, alpha
E07	Hs.386189	NM_016426	GTSE1	G-2 and S-phase expressed 1
E08	Hs.152983	NM_004507	HUS1	HUS1 checkpoint homolog (S. pombe)
E09	Hs.300559	NM_014708	KNTC1	Kinetochore associated 1
E10	Hs.594238	NM_002266	KPNA2	Karyopherin alpha 2 (RAG cohort 1, importin alpha 1)
E11	Hs.591697	NM_002358	MAD2L1	MAD2 mitotic arrest deficient-like 1 (yeast)
E12	Hs.19400	NM_006341	MAD2L2	MAD2 mitotic arrest deficient-like 2 (yeast)
F01	Hs.477481	NM_004526	MCM2	Minichromosome maintenance complex component 2
F02	Hs.179565	NM_002388	MCM3	Minichromosome maintenance complex component 3
F03	Hs.460184	NM_005914	MCM4	Minichromosome maintenance complex component 4
F04	Hs.517582	NM_006739	MCM5	Minichromosome maintenance complex component 5
F05	Hs.484551	NM_002392	MDM2	Mdm2 p53 binding protein homolog (mouse)
F06	Hs.689823	NM_002417	MKI67	Antigen identified by monoclonal antibody Ki-67
F07	Hs.509523	NM_002431	MNAT1	Menage a trois homolog 1, cyclin H assembly factor (Xenopus laevis)
F08	Hs.192649	NM_005590	MRE11A	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)
F09	Hs.492208	NM_002485	NBN	Nibrin
F10	Hs.531879	NM_002853	RAD1	RAD1 homolog (S. pombe)
F11	Hs.16184	NM_002873	RAD17	RAD17 homolog (S. pombe)
F12	Hs.631709	NM_002875	RAD51	RAD51 homolog (S. cerevisiae)
G01	Hs.655354	NM_004584	RAD9A	RAD9 homolog A (S. pombe)
G02	Hs.408528	NM_000321	RB1	Retinoblastoma 1
G03	Hs.546282	NM_002894	RBBP8	Retinoblastoma binding protein 8
G04	Hs.207745	NM_002895	RBL1	Retinoblastoma-like 1 (p107)
G05	Hs.513609	NM_005611	RBL2	Retinoblastoma-like 2 (p130)
G06	Hs.269898	NM_013376	SERTAD1	SERTA domain containing 1
G07	Hs.23348	NM_005983	SKP2	S-phase kinase-associated protein 2 (p45)
G08	Hs.209983	NM_005563	STMN1	Stathmin 1
G09	Hs.79353	NM_007111	TFDP1	Transcription factor Dp-1
G10	Hs.379018	NM_006286	TFDP2	Transcription factor Dp-2 (E2F dimerization partner 2)
G11	Hs.654481	NM_000546	TP53	Tumor protein p53
G12	Hs.249441	NM_003390	WEE1	WEE1 homolog (S. pombe)
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 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
RT² 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
RT² 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.

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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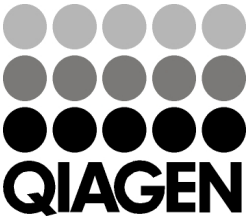

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