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

Human Cancer Drug Targets

Cat. no. 330231 PAHS-507ZA

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 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	ATF2	AURKA	AURKB	AURKC	BCL2	BIRC5	CDC25A	CDK1	CDK2
B	CDK4	CDK5	CDK7	CDK8	CDK9	CTSB	CTSD	CTSL1	CTSS	EGFR	ERBB2	ERBB3
C	ERBB4	ESR1	ESR2	FIGF	FLT1	FLT4	GRB2	GSTP1	HDAC1	HDAC11	HDAC2	HDAC3
D	HDAC4	HDAC6	HDAC7	HDAC8	HIF1A	HRAS	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	TP53	TXN	TXNRD1
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.709181	NM_004996	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A02	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A03	Hs.631535	NM_001626	AKT2	V-akt murine thymoma viral oncogene homolog 2
A04	Hs.592510	NM_001880	ATF2	Activating transcription factor 2
A05	Hs.250822	NM_003600	AURKA	Aurora kinase A
A06	Hs.442658	NM_004217	AURKB	Aurora kinase B
A07	Hs.98338	NM_003160	AURKC	Aurora kinase C
A08	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A09	Hs.728893	NM_001168	BIRC5	Baculoviral IAP repeat containing 5
A10	Hs.437705	NM_001789	CDC25A	Cell division cycle 25 homolog A (S. pombe)
A11	Hs.334562	NM_001786	CDK1	Cyclin-dependent kinase 1
A12	Hs.19192	NM_001798	CDK2	Cyclin-dependent kinase 2
B01	Hs.95577	NM_000075	CDK4	Cyclin-dependent kinase 4
B02	Hs.647078	NM_004935	CDK5	Cyclin-dependent kinase 5
B03	Hs.184298	NM_001799	CDK7	Cyclin-dependent kinase 7
B04	Hs.382306	NM_001260	CDK8	Cyclin-dependent kinase 8
B05	Hs.150423	NM_001261	CDK9	Cyclin-dependent kinase 9
B06	Hs.520898	NM_001908	CTSB	Cathepsin B
B07	Hs.121575	NM_001909	CTSD	Cathepsin D
B08	Hs.716407	NM_001912	CTSL1	Cathepsin L1
B09	Hs.181301	NM_004079	CTSS	Cathepsin S
B10	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
B11	Hs.446352	NM_004448	ERBB2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B12	Hs.118681	NM_001982	ERBB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C01	Hs.390729	NM_005235	ERBB4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
C02	Hs.208124	NM_000125	ESR1	Estrogen receptor 1
C03	Hs.729020	NM_001437	ESR2	Estrogen receptor 2 (ER beta)
C04	Hs.11392	NM_004469	FIGF	C-fos induced growth factor (vascular endothelial growth factor D)
C05	Hs.654360	NM_002019	FLT1	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
C06	Hs.646917	NM_002020	FLT4	Fms-related tyrosine kinase 4
C07	Hs.444356	NM_002086	GRB2	Growth factor receptor-bound protein 2
C08	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
C09	Hs.88556	NM_004964	HDAC1	Histone deacetylase 1
C10	Hs.404802	NM_024827	HDAC11	Histone deacetylase 11
C11	Hs.3352	NM_001527	HDAC2	Histone deacetylase 2
C12	Hs.519632	NM_003883	HDAC3	Histone deacetylase 3
D01	Hs.20516	NM_006037	HDAC4	Histone deacetylase 4
D02	Hs.6764	NM_006044	HDAC6	Histone deacetylase 6
D03	Hs.200063	NM_001098416	HDAC7	Histone deacetylase 7
D04	Hs.310536	NM_018486	HDAC8	Histone deacetylase 8
D05	Hs.597216	NM_001530	HIF1A	Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D06	Hs.37003	NM_005343	HRAS	V-Ha-ras Harvey rat sarcoma viral oncogene homolog

Position	UniGene	GenBank	Symbol	Description
D07	Hs.525600	NM_001017963	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1
D08	Hs.192374	NM_003299	HSP90B1	Heat shock protein 90kDa beta (Grp94), member 1
D09	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
D10	Hs.643120	NM_000875	IGF1R	Insulin-like growth factor 1 receptor
D11	Hs.523414	NM_000612	IGF2	Insulin-like growth factor 2 (somatomedin A)
D12	Hs.521181	NM_001098629	IRF5	Interferon regulatory factor 5
E01	Hs.479756	NM_002253	KDR	Kinase insert domain receptor (a type III receptor tyrosine kinase)
E02	Hs.479754	NM_000222	KIT	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E03	Hs.505033	NM_004985	KRAS	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E04	Hs.484551	NM_002392	MDM2	Mdm2 p53 binding protein homolog (mouse)
E05	Hs.497492	NM_002393	MDM4	Mdm4 p53 binding protein homolog (mouse)
E06	Hs.338207	NM_004958	MTOR	Mechanistic target of rapamycin (serine/threonine kinase)
E07	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E08	Hs.486502	NM_002524	NRAS	Neuroblastoma RAS viral (v-ras) oncogene homolog
E09	Hs.158336	NM_006181	NTN3	Netrin 3
E10	Hs.177766	NM_001618	PARP1	Poly (ADP-ribose) polymerase 1
E11	Hs.409412	NM_005484	PARP2	Poly (ADP-ribose) polymerase 2
E12	Hs.718412	NM_006437	PARP4	Poly (ADP-ribose) polymerase family, member 4
F01	Hs.74615	NM_006206	PDGFRA	Platelet-derived growth factor receptor, alpha polypeptide
F02	Hs.509067	NM_002609	PDGFRB	Platelet-derived growth factor receptor, beta polypeptide
F03	Hs.32405	NM_000926	PGR	Progesterone receptor
F04	Hs.175343	NM_002645	PIK3C2A	Phosphoinositide-3-kinase, class 2, alpha polypeptide
F05	Hs.464971	NM_002647	PIK3C3	Phosphoinositide-3-kinase, class 3
F06	Hs.553498	NM_006218	PIK3CA	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
F07	Hs.592049	NM_005030	PLK1	Polo-like kinase 1
F08	Hs.398157	NM_006622	PLK2	Polo-like kinase 2
F09	Hs.632415	NM_004073	PLK3	Polo-like kinase 3
F10	Hs.172052	NM_014264	PLK4	Polo-like kinase 4
F11	Hs.531704	NM_002737	PRKCA	Protein kinase C, alpha
F12	Hs.460355	NM_002738	PRKCB	Protein kinase C, beta
G01	Hs.155342	NM_006254	PRKCD	Protein kinase C, delta
G02	Hs.580351	NM_005400	PRKCE	Protein kinase C, epsilon
G03	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
G04	Hs.247077	NM_001664	RHOA	Ras homolog gene family, member A
G05	Hs.502876	NM_004040	RHOB	Ras homolog gene family, member B
G06	Hs.492203	NM_198253	TERT	Telomerase reverse transcriptase
G07	Hs.370267	NM_003747	TNKS	Tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase
G08	Hs.156346	NM_001067	TOP2A	Topoisomerase (DNA) II alpha 170kDa
G09	Hs.475733	NM_001068	TOP2B	Topoisomerase (DNA) II beta 180kDa
G10	Hs.654481	NM_000546	TP53	Tumor protein p53
G11	Hs.435136	NM_003329	TXN	Thioredoxin
G12	Hs.728817	NM_003330	TXNRD1	Thioredoxin reductase 1
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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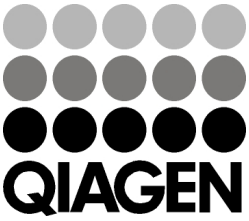

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