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

Human Prostate Cancer

Cat. no. 330231 PAHS-135ZA

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 Prostate Cancer RT² Profiler PCR Array profiles the expression of 84 key genes commonly involved in prostate cancer development. One of the top lethal cancers in the United States, prostate cancer is a neoplasm of the male reproductive gland that manifests primarily after the age of fifty. The molecular cause of prostate cancer is still unclear, but is often associated with deregulated androgen signaling and aberrant metabolism of macromolecules such as fatty acids. Indeed, androgen ablation therapy causes regression of primary and metastatic androgen-dependent prostate cancer. Androgen receptor expression seems to promote prostate cancer cell survival, but inhibiting the androgen receptor has, so far, been clinically less effective than predicted. Polyunsaturated fatty acids cause prostate tumor progression and increased mortality, while diets rich in omega-3 fatty acids seem to benefit prostate cancer patients. Research directed at these pathways may yield insights into the molecular mechanisms behind prostate oncogenesis. This array represents genes involved in androgen receptor, PI3 kinase/AKT, and PTEN signaling, as well as the cell cycle and apoptotic pathways. The 84 key genes also include deregulated genes detected routinely in molecular analysis of prostate cancer samples and in high-throughput microarray profiling studies, as well as genes known to have differentially methylated promoters in prostate cancer. Prostate cancers tend to metastasize; therefore, the array includes genes associated with metastatic potential. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in prostate cancer initiation, progression, and metastasis 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	ACACA	AKT1	APC	AR	ARNTL	BCL2	CAMKK1	CAMSAP1	CASP3	CAV1	CAV2	CCNA1
B	CCND1	CCND2	CDH1	CDKN2A	CLN3	CREB1	DAXX	DDX11	DKK3	DLC1	ECT2	EDNRB
C	EGFR	EGR3	ERG	ETV1	FASN	FOXO1	GCA	GNRH1	GPX3	GSTP1	HAL	HMGCR
D	IGF1	IGFBP5	IL6	KLHL13	KLK3	LGALS4	LOXL1	MAPK1	MAX	MGMT	MKI67	MSX1
E	MTO1	NDRG3	NFKB1	NKX3-1	NRIP1	PDLIM4	PDPK1	PES1	PPP2R1B	PRKAB1	PTEN	PTGS1
F	PTGS2	RARB	RASSF1	RBM39	SCAF11	SEPT7	SFRP1	SHBG	SLC5A8	SOCS3	SOX4	SREBF1
G	STK11	SUPT7L	TFPI2	TGFB1I1	TIMP2	TIMP3	TMPRSS2	TNFRSF10D	TP53	USP5	VEGFA	ZNF185
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.160556	NM_198834	ACACA	Acetyl-CoA carboxylase alpha
A02	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A03	Hs.158932	NM_000038	APC	Adenomatous polyposis coli
A04	Hs.496240	NM_000044	AR	Androgen receptor
A05	Hs.65734	NM_001178	ARNTL	Aryl hydrocarbon receptor nuclear translocator-like
A06	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A07	Hs.8417	NM_032294	CAMKK1	Calcium/calmodulin-dependent protein kinase kinase 1, alpha
A08	Hs.522493	NM_015447	CAMSAP1	Calmodulin regulated spectrin-associated protein 1
A09	Hs.141125	NM_004346	CASP3	Caspase 3, apoptosis-related cysteine peptidase
A10	Hs.74034	NM_001753	CAV1	Caveolin 1, caveolae protein, 22kDa
A11	Hs.212332	NM_001233	CAV2	Caveolin 2
A12	Hs.417050	NM_003914	CCNA1	Cyclin A1
B01	Hs.523852	NM_053056	CCND1	Cyclin D1
B02	Hs.376071	NM_001759	CCND2	Cyclin D2
B03	Hs.461086	NM_004360	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
B04	Hs.512599	NM_000077	CDKN2A	Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
B05	Hs.628393	NM_000086	CLN3	Ceroid-lipofuscinosis, neuronal 3
B06	Hs.516646	NM_004379	CREB1	CAMP responsive element binding protein 1
B07	Hs.336916	NM_001350	DAXX	Death-domain associated protein
B08	Hs.443960	NM_004399	DDX11	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 11
B09	Hs.292156	NM_015881	DKK3	Dickkopf homolog 3 (Xenopus laevis)
B10	Hs.134296	NM_006094	DLC1	Deleted in liver cancer 1
B11	Hs.518299	NM_018098	ECT2	Epithelial cell transforming sequence 2 oncogene
B12	Hs.82002	NM_000115	EDNRB	Endothelin receptor type B
C01	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
C02	Hs.534313	NM_004430	EGR3	Early growth response 3
C03	Hs.473819	NM_182918	ERG	V-ets erythroblastosis virus E26 oncogene homolog (avian)
C04	Hs.22634	NM_004956	ETV1	Ets variant 1
C05	Hs.83190	NM_004104	FASN	Fatty acid synthase
C06	Hs.370666	NM_002015	FOXO1	Forkhead box O1
C07	Hs.377894	NM_012198	GCA	Grancalcin, EF-hand calcium binding protein
C08	Hs.82963	NM_000825	GNRH1	Gonadotropin-releasing hormone 1 (luteinizing-releasing hormone)
C09	Hs.386793	NM_002084	GPX3	Glutathione peroxidase 3 (plasma)
C10	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
C11	Hs.190783	NM_002108	HAL	Histidine ammonia-lyase
C12	Hs.643495	NM_000859	HMGCR	3-hydroxy-3-methylglutaryl-CoA reductase
D01	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
D02	Hs.607212	NM_000599	IGFBP5	Insulin-like growth factor binding protein 5
D03	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D04	Hs.348262	NM_033495	KLHL13	Kelch-like 13 (Drosophila)
D05	Hs.171995	NM_001648	KLK3	Kallikrein-related peptidase 3
D06	Hs.5302	NM_006149	LGALS4	Lectin, galactoside-binding, soluble, 4
D07	Hs.65436	NM_005576	LOXL1	Lysyl oxidase-like 1
D08	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
D09	Hs.285354	NM_002382	MAX	MYC associated factor X

Position	UniGene	GenBank	Symbol	Description
D10	Hs.501522	NM_002412	MGMT	O-6-methylguanine-DNA methyltransferase
D11	Hs.689823	NM_002417	MKI67	Antigen identified by monoclonal antibody Ki-67
D12	Hs.424414	NM_002448	MSX1	Msh homeobox 1
E01	Hs.347614	NM_012123	MTO1	Mitochondrial translation optimization 1 homolog (S. cerevisiae)
E02	Hs.437338	NM_022477	NDRG3	NDRG family member 3
E03	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E04	Hs.55999	NM_006167	NKX3-1	NK3 homeobox 1
E05	Hs.155017	NM_003489	NRIP1	Nuclear receptor interacting protein 1
E06	Hs.424312	NM_003687	PDLIM4	PDZ and LIM domain 4
E07	Hs.459691	NM_002613	PDPK1	3-phosphoinositide dependent protein kinase-1
E08	Hs.517543	NM_014303	PES1	Pescadillo homolog 1, containing BRCT domain (zebrafish)
E09	Hs.584790	NM_002716	PPP2R1B	Protein phosphatase 2, regulatory subunit A, beta
E10	Hs.715515	NM_006253	PRKAB1	Protein kinase, AMP-activated, beta 1 non-catalytic subunit
E11	Hs.500466	NM_000314	PTEN	Phosphatase and tensin homolog
E12	Hs.201978	NM_000962	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
F01	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F02	Hs.654490	NM_000965	RARB	Retinoic acid receptor, beta
F03	Hs.476270	NM_007182	RASSF1	Ras association (RalGDS/AF-6) domain family member 1
F04	Hs.282901	NM_004902	RBM39	RNA binding motif protein 39
F05	Hs.715491	NM_004719	SCAF11	SR-related CTD-associated factor 11
F06	Hs.191346	NM_001788	SEPT7	Septin 7
F07	Hs.713546	NM_003012	SFRP1	Secreted frizzled-related protein 1
F08	Hs.632235	NM_001040	SHBG	Sex hormone-binding globulin
F09	Hs.444536	NM_145913	SLC5A8	Solute carrier family 5 (iodide transporter), member 8
F10	Hs.527973	NM_003955	SOCS3	Suppressor of cytokine signaling 3
F11	Hs.643910	NM_003107	SOX4	SRY (sex determining region Y)-box 4
F12	Hs.592123	NM_004176	SREBF1	Sterol regulatory element binding transcription factor 1
G01	Hs.515005	NM_000455	STK11	Serine/threonine kinase 11
G02	Hs.6232	NM_014860	SUPT7L	Suppressor of Ty 7 (S. cerevisiae)-like
G03	Hs.438231	NM_006528	TFPI2	Tissue factor pathway inhibitor 2
G04	Hs.513530	NM_015927	TGFB1I1	Transforming growth factor beta 1 induced transcript 1
G05	Hs.633514	NM_003255	TIMP2	TIMP metallopeptidase inhibitor 2
G06	Hs.644633	NM_000362	TIMP3	TIMP metallopeptidase inhibitor 3
G07	Hs.439309	NM_005656	TMPRSS2	Transmembrane protease, serine 2
G08	Hs.213467	NM_003840	TNFRSF10D	Tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain
G09	Hs.654481	NM_000546	TP53	Tumor protein p53
G10	Hs.631661	NM_003481	USP5	Ubiquitin specific peptidase 5 (isopeptidase T)
G11	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G12	Hs.16622	NM_007150	ZNF185	Zinc finger protein 185 (LIM domain)
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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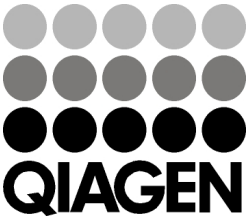

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