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

Rat Prostate Cancer

Cat. no. 330231 PARN-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 Rat 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	Abcb1b	Acaca	Akt1	Apc	Ar	Arntl	Bcl2	Camkk1	Casp3	Cav1	Cav2	Ccna1
B	Ccnd1	Ccnd2	Cdh1	Cdkn1a	Cdkn2a	Cln3	Creb1	Dab2ip	Daxx	Dkk3	Dlc1	Ect2
C	Ednrb	Egfr	Egr3	Erg	Etv1	Fasn	Gadd45a	Gca	Gnrh1	Gpx3	Gstp1	Hal
D	Hmgcr	Igf1	Igfbp5	Il6	Ints6	Lgals4	Loxl1	Mapk1	Max	Mgmt	Mki67	Msx1
E	Mto1	Ndrg3	Nexn	Nfkb1	Nkx3-1	Nrip1	Pdpk1	Pes1	Ppp2r1b	Prkab1	Pten	Ptgs1
F	Ptgs2	Rarb	Rassf1	Rb1	Rbm39	Rbp1	Scaf11	Sfn	Sfrp1	Shbg	Slc5a8	Socs3
G	Sox4	Srebf1	Stk11	Supt7l	Tfpi2	Tgfb1i1	Timp2	Timp3	Tmprss2	Tp53	Usp5	Vegfa
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.144554	NM_012623	Abcb1b	ATP-binding cassette, subfamily B (MDR/TAP), member 1B
A02	Rn.44372	NM_022193	Acaca	Acetyl-coenzyme A carboxylase alpha
A03	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A04	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A05	Rn.9813	NM_012502	Ar	Androgen receptor
A06	Rn.14532	NM_024362	Arntl	Aryl hydrocarbon receptor nuclear translocator-like
A07	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A08	Rn.4851	NM_031662	Camkk1	Calcium/calmodulin-dependent protein kinase kinase 1, alpha
A09	Rn.10562	NM_012922	Casp3	Caspase 3
A10	Rn.22518	NM_031556	Cav1	Caveolin 1, caveolae protein
A11	Rn.81070	NM_131914	Cav2	Caveolin 2
A12	Rn.102823	NM_001011949	Ccna1	Cyclin A1
B01	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B02	Rn.96083	NM_022267	Ccnd2	Cyclin D2
B03	Rn.1303	NM_031334	Cdh1	Cadherin 1
B04	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
B05	Rn.48717	NM_031550	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
B06	Rn.102386	NM_001006971	Cln3	Ceroid-lipofuscinosis, neuronal 3
B07	Rn.90061	NM_031017	Creb1	CAMP responsive element binding protein 1
B08	Rn.14323	NM_138710	Dab2ip	DAB2 interacting protein
B09	Rn.870	NM_080891	Daxx	Death-domain associated protein
B10	Rn.12516	NM_138519	Dkk3	Dickkopf homolog 3 (Xenopus laevis)
B11	Rn.7255	NM_001127446	Dlc1	Deleted in liver cancer 1
B12	Rn.168292	NM_001108547	Ect2	Epithelial cell transforming sequence 2 oncogene
C01	Rn.11412	NM_017333	Ednrb	Endothelin receptor type B
C02	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
C03	Rn.44371	NM_017086	Egr3	Early growth response 3
C04	Rn.50673	NM_133397	Erg	V-ets erythroblastosis virus E26 oncogene homolog (avian)
C05	Rn.76536	NM_001108709	Etv1	Ets variant 1
C06	Rn.9486	NM_017332	Fasn	Fatty acid synthase
C07	Rn.10250	NM_024127	Gadd45a	Growth arrest and DNA-damage-inducible, alpha
C08	Rn.221937	NM_001106483	Gca	Grancalcin
C09	Rn.59459	NM_012767	Gnrh1	Gonadotropin-releasing hormone 1 (luteinizing-releasing hormone)
C10	Rn.108074	NM_022525	Gpx3	Glutathione peroxidase 3
C11	Rn.87063	NM_012577	Gstp1	Glutathione S-transferase pi 1
C12	Rn.10037	NM_017159	Hal	Histidine ammonia lyase
D01	Rn.9437	NM_013134	Hmgcr	3-hydroxy-3-methylglutaryl-Coenzyme A reductase
D02	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
D03	Rn.1593	NM_012817	Igfbp5	Insulin-like growth factor binding protein 5
D04	Rn.9873	NM_012589	Il6	Interleukin 6
D05	Rn.202377	NM_001047904	Ints6	Integrator complex subunit 6
D06	Rn.9656	NM_012975	Lgals4	Lectin, galactoside-binding, soluble, 4
D07	Rn.770	NM_001012125	Loxl1	Lysyl oxidase-like 1
D08	Rn.34914	NM_053842	Mapk1	Mitogen activated protein kinase 1
D09	Rn.4210	NM_022210	Max	MYC associated factor X

Position	UniGene	GenBank	Symbol	Description
D10	Rn.9836	NM_012861	Mgmt	O-6-methylguanine-DNA methyltransferase
D11	Rn.73551	XM_225460	Mki67	Antigen identified by monoclonal antibody Ki-67
D12	Rn.18117	NM_031059	Msx1	Msh homeobox 1
E01	Rn.216594	NM_001106841	Mto1	Mitochondrial translation optimization 1 homolog (S. cerevisiae)
E02	Rn.93910	NM_001013923	Ndrg3	N-myc downstream regulated gene 3
E03	Rn.107975	NM_139230	Nexn	Nexilin (F actin binding protein)
E04	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E05	Rn.43468	NM_001034144	Nkx3-1	NK3 homeobox 1
E06	Rn.198927	NM_001100560	Nrip1	Nuclear receptor interacting protein 1
E07	Rn.10905	NM_031081	Pdpk1	3-phosphoinositide dependent protein kinase-1
E08	Rn.9521	NM_001044228	Pes1	Pescadillo homolog 1, containing BRCT domain (zebrafish)
E09	Rn.163017	NM_001025418	Ppp2r1b	Protein phosphatase 2 (formerly 2A), regulatory subunit A, beta isoform
E10	Rn.3619	NM_031976	Prkab1	Protein kinase, AMP-activated, beta 1 non-catalytic subunit
E11	Rn.22158	NM_031606	Pten	Phosphatase and tensin homolog
E12	Rn.44404	NM_017043	Ptgs1	Prostaglandin-endoperoxide synthase 1
F01	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F02	Rn.220045	XM_223843	Rarb	Retinoic acid receptor, beta
F03	Rn.83042	NM_001007754	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
F04	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
F05	Rn.8555	NM_001013207	Rbm39	RNA binding motif protein 39
F06	Rn.902	NM_012733	Rbp1	Retinol binding protein 1, cellular
F07	Rn.199124	XM_231361	Scaf11	SR-related CTD-associated factor 11
F08	Rn.145079	XM_232745	Sfn	Stratifin
F09	Rn.163333	XM_224987	Sfrp1	Secreted frizzled-related protein 1
F10	Rn.37473	NM_012650	Shbg	Sex hormone binding globulin
F11	Rn.102040	XM_576209	Slc5a8	Solute carrier family 5 (iodide transporter), member 8
F12	Rn.127801	NM_053565	Socs3	Suppressor of cytokine signaling 3
G01	Rn.163667	XM_344594	Sox4	SRY (sex determining region Y)-box 4
G02	Rn.221929	XM_213329	Srebf1	Sterol regulatory element binding transcription factor 1
G03	Rn.12052	NM_001108069	Stk11	Serine/threonine kinase 11
G04	Rn.11526	NM_001108010	Supt7l	Suppressor of Ty 7 (S. cerevisiae)-like
G05	Rn.15776	NM_173141	Tfpi2	Tissue factor pathway inhibitor 2
G06	Rn.103260	XM_341934	Tgfb1i1	Transforming growth factor beta 1 induced transcript 1
G07	Rn.10161	NM_021989	Timp2	TIMP metallopeptidase inhibitor 2
G08	Rn.119634	NM_012886	Timp3	TIMP metallopeptidase inhibitor 3
G09	Rn.81082	NM_130424	Tmprss2	Transmembrane protease, serine 2
G10	Rn.54443	NM_030989	Tp53	Tumor protein p53
G11	Rn.44078	NM_001106619	Usp5	Ubiquitin specific peptidase 5 (isopeptidase T)
G12	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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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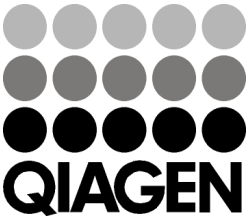

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