RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Cancer Drug Targets

Cat. no. 330231 PARN-507ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat 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 the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.10495	NM_022281	Abcc1	ATP-binding cassette, subfamily C (CFTR/MRP), member 1
A02	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A03	Rn.87066	NM_017093	Akt2	V-akt murine thymoma viral oncogene homolog 2
A04	Rn.9825	NM_031018	Atf2	Activating transcription factor 2
A05	Rn.161874	NM_153296	Aurka	Aurora kinase A
A06	Rn.10865	NM_053749	Aurkb	Aurora kinase B
A07	Rn.41092	NM_001106221	Aurkc	Aurora kinase C
A08	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A09	Rn.54471	NM_022274	Birc5	Baculoviral IAP repeat-containing 5
A10	Rn.11390	NM_133571	Cdc25a	Cell division cycle 25 homolog A (S. pombe)
A11	Rn.6934	NM_019296	Cdk1	Cyclin-dependent kinase 1
A12	Rn.104460	NM_199501	Cdk2	Cyclin dependent kinase 2
B01	Rn.6115	NM_053593	Cdk4	Cyclin-dependent kinase 4
B02	Rn.10749	NM_080885	Cdk5	Cyclin-dependent kinase 5
B03	Rn.98896	XM_215467	Cdk7	Cyclin-dependent kinase 7
B04	Rn.98228	NM_001007743	Cdk9	Cyclin-dependent kinase 9
B05	Rn.100909	NM_022597	Ctsb	Cathepsin B
B06	Rn.11085	NM_134334	Ctsd	Cathepsin D
B07	Rn.1294	NM_013156	Ctsl1	Cathepsin L1
B08	Rn.11347	NM_017320	Ctss	Cathepsin S
B09	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
B10	Rn.93966	NM_017003	Erbb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B11	Rn.10228	NM_017218	Erbb3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
B12	Rn.163078	NM_021687	Erbb4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
C01	Rn.10595	NM_012689	Esr1	Estrogen receptor 1
C02	Rn.37460	NM_012754	Esr2	Estrogen receptor 2 (ER beta)
C03	Rn.10796	NM_031761	Figf	C-fos induced growth factor
C04	Rn.10239	NM_019306	Flt1	Fms-related tyrosine kinase 1
C05	Rn.81043	NM_053652	Flt4	Fms-related tyrosine kinase 4
C06	Rn.3360	NM_030846	Grb2	Growth factor receptor bound protein 2
C07	Rn.87063	NM_012577	Gstp1	Glutathione S-transferase pi 1
C08	Rn.1863	NM_001025409	Hdac1	Histone deacetylase 1
C09	Rn.28065	NM_001106610	Hdac11	Histone deacetylase 11
C10	Rn.1797	NM_053447	Hdac2	Histone deacetylase 2
C11	Rn.17284	NM_053448	Hdac3	Histone deacetylase 3
C12	Rn.23483	XM_343629	Hdac4	Histone deacetylase 4
D01	Rn.13453	XM_228753	Hdac6	Histone deacetylase 6
D02	Rn.203327	XM_345868	Hdac7	Histone deacetylase 7
D03	Rn.208476	NM_001126373	Hdac8	Histone deacetylase 8
D04	Rn.10852	NM_024359	Hif1a	Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D05	Rn.102180	NM_001098241	Hras	Harvey rat sarcoma virus oncogene
D06	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
D07	Rn.101146	NM_001012197	Hsp90b1	Heat shock protein 90, beta, member 1
D08	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
D09	Rn.10957	NM_052807	Igf1r	Insulin-like growth factor 1 receptor
D10	Rn.118681	NM_031511	Igf2	Insulin-like growth factor 2
D11	Rn.203787	NM_001106586	Irf5	Interferon regulatory factor 5
D12	Rn.88869	NM_013062	Kdr	Kinase insert domain receptor
E01	Rn.54004	NM_022264	Kit	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E02	Rn.24554	NM_031515	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E03	Rn.91829	NM_001108099	Mdm2	Mdm2 p53 binding protein homolog (mouse)
E04	Rn.90967	NM_001012026	Mdm4	Mdm4 p53 binding protein homolog (mouse)
E05	Rn.11008	NM_019906	Mtor	Mechanistic target of rapamycin (serine/threonine kinase)
E06	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E07	Rn.217722	NM_080766	Nras	Neuroblastoma ras oncogene

Position	UniGene	GenBank	Symbol	Description
E08	Rn.95949	NM_053732	Ntn3	Netrin 3
E09	Rn.11327	NM_013063	Parp1	Poly (ADP-ribose) polymerase 1
E10	Rn.22730	NM_001106030	Parp2	Poly (ADP-ribose) polymerase 2
E11	Rn.55127	NM_012802	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
E12	Rn.98311	NM_031525	Pdgfrb	Platelet derived growth factor receptor, beta polypeptide
F01	Rn.10303	NM_022847	Pgr	Progesterone receptor
F02	Rn.60820	NM_001108500	Pik3c2a	Phosphoinositide-3-kinase, class 2, alpha polypeptide
F03	Rn.30010	NM_022958	Pik3c3	Phosphoinositide-3-kinase, class 3
F04	Rn.44193	NM_133399	Pik3ca	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
F05	Rn.11034	NM_017100	Plk1	Polo-like kinase 1 (Drosophila)
F06	Rn.12100	NM_031821	Plk2	Polo-like kinase 2 (Drosophila)
F07	Rn.9284	NM_022187	Plk3	Polo-like kinase 3 (Drosophila)
F08	Rn.14848	NM_001107669	Plk4	Polo-like kinase 4 (Drosophila)
F09	Rn.207908	NM_001105713	Prkca	Protein kinase C, alpha
F10	Rn.91118	NM_012713	Prkcb	Protein kinase C, beta
F11	Rn.98279	NM_133307	Prkcd	Protein kinase C, delta
F12	Rn.216481	NM_017171	Prkce	Protein kinase C, epsilon
G01	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
G02	Rn.1331	NM_001109061	RGD1560888	Similar to Cell division protein kinase 8 (Protein kinase K35)
G03	Rn.107401	NM_057132	Rhoa	Ras homolog gene family, member A
G04	Rn.2042	NM_022542	Rhob	Ras homolog gene family, member B
G05	Rn.48802	NM_053423	Tert	Telomerase reverse transcriptase
G06	Rn.213840	NM_001106084	Tnks	Tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase
G07	Rn.90996	NM_022183	Top2a	Topoisomerase (DNA) II alpha
G08	Rn.54443	NM_030989	Tp53	Tumor protein p53
G09	Rn.29777	NM_053800	Txn1	Thioredoxin 1
G10	Rn.67581	NM_031614	Txnrd1	Thioredoxin reductase 1
G11	Rn.198550	NM_053549	Vegfb	Vascular endothelial growth factor B
G12	Rn.6913	NM_053653	Vegfc	Vascular endothelial growth factor C
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 ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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