RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Estrogen Receptor Signaling

Cat. no. 330231 PARN-005ZR

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 Estrogen Receptor Signaling RT² Profiler PCR Array profiles the expression of 84 key genes involved in estrogen receptor (ER) activation and response. Estrogen receptors are steroid hormone receptors important in development, growth, and reproduction. The 2 well-characterized ERs, alpha and beta, interact with a variety of co-regulators in the nucleus and initiate target gene transcription. ERs can also associate with the cell membrane, where they activate downstream signaling pathways. ERs play a large role in female organ cancers, especially breast cancer. The mechanisms of ER signaling are not entirely understood since tissue-specific ER responses vary depending on the agonist or antagonist. ER signaling is important in mammalian systems other than female organs. For example, ERs are involved in neurological development, and estrogens play a protective role against cardiovascular disease and osteoporosis, although the exact mechanisms of these processes are under investigation. This array includes the ERs, their co-regulators and interacting proteins, and downstream target genes. Results obtained with this array can yield insights into ER mechanisms and responses. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in estrogenic signaling with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

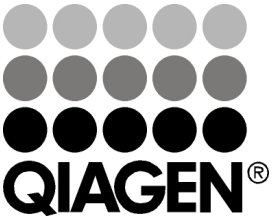
Shipping and storage

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.32078	NM_017155	Adora1	Adenosine A1 receptor
A02	Rn.91370	NM_013149	Ahr	Aryl hydrocarbon receptor
A03	Rn.163146	NM_053665	Akap1	A kinase (PRKA) anchor protein 1
A04	Rn.19953	NM_080478	Apbb1	Amyloid beta (A4) precursor protein-binding, family B, member 1 (Fe65)
A05	Rn.40101	NM_012931	Bcar1	Breast cancer anti-estrogen resistance 1
A06	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A07	Rn.11266	NM_012513	Bdnf	Brain-derived neurotrophic factor
A08	Rn.10318	NM_012827	Bmp4	Bone morphogenetic protein 4
A09	Rn.18030	XM_342591	Bmp7	Bone morphogenetic protein 7
A10	Rn.48840	NM_012514	Brca1	Breast cancer 1
A11	Rn.11378	NM_016994	C3	Complement component 3
A12	Rn.22518	NM_031556	Cav1	Caveolin 1, caveolae protein
B01	Rn.137780	NM_001105822	Ccl12	Chemokine (C-C motif) ligand 12
B02	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B03	Rn.31765	NM_053698	Cited2	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2
B04	Rn.1472	NM_012529	Ckb	Creatine kinase, brain
B05	Rn.17145	NM_022266	Ctgf	Connective tissue growth factor
B06	Rn.11085	NM_134334	Ctsd	Cathepsin D
B07	Rn.21402	NM_017085	Cyp19a1	Cytochrome P450, family 19, subfamily a, polypeptide 1
B08	Rn.10352	NM_012540	Cyp1a1	Cytochrome P450, family 1, subfamily a, polypeptide 1
B09	Rn.64132	NM_001009665	Ebag9	Estrogen receptor binding site associated, antigen, 9
B10	Rn.10714	NM_053903	Efna5	Ephrin A5
B11	Rn.44371	NM_017086	Egr3	Early growth response 3
B12	Rn.93966	NM_017003	Erbb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
C01	Rn.10228	NM_017218	Erbb3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C02	Rn.10595	NM_012689	Esr1	Estrogen receptor 1
C03	Rn.37460	NM_012754	Esr2	Estrogen receptor 2 (ER beta)
C04	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C05	Rn.10470	NM_012742	Foxa1	Forkhead box A1
C06	Rn.162557	NM_012561	Fst	Follistatin
C07	Rn.11040	NM_017006	G6pd	Glucose-6-phosphate dehydrogenase
C08	Rn.9806	NM_133573	Gper	G protein-coupled estrogen receptor 1
C09	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
C10	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
C11	Rn.160666	NM_001004274	Igfbp4	Insulin-like growth factor binding protein 4
C12	Rn.1593	NM_012817	Igfbp5	Insulin-like growth factor binding protein 5
D01	Rn.10476	NM_012969	Irs1	Insulin receptor substrate 1
D02	Rn.15806	NM_021836	Junb	Jun B proto-oncogene
D03	Rn.9880	NM_012725	Klkb1	Kallikrein B, plasma 1
D04	Rn.10378	NM_017345	L1cam	L1 cell adhesion molecule
D05	Rn.57	NM_019904	Lgals1	Lectin, galactoside-binding, soluble, 1
D06	Rn.3834	NM_012598	Lpl	Lipoprotein lipase
D07	Rn.40942	NM_021587	Ltbp1	Latent transforming growth factor beta binding protein 1
D08	Rn.31639	NM_001130573	Maff	V-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)
D09	Rn.4262	NM_001134361	Med1	Mediator complex subunit 1
D10	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
D11	Rn.5840	NM_022588	Mta1	Metastasis associated 1
D12	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
E01	Rn.161939	NM_001134874	Nab2	Ngfi-A binding protein 2
E02	Rn.49136	NM_031822	Ncoa2	Nuclear receptor coactivator 2
E03	Rn.20691	XM_215947	Ncoa3	Nuclear receptor coactivator 3
E04	Rn.24948	XM_001077495	Ncor1	Nuclear receptor co-repressor 1
E05	Rn.113362	NM_001108334	Ncor2	Nuclear receptor co-repressor 2
E06	Rn.162955	NM_030868	Nov	Nephroblastoma overexpressed gene
E07	Rn.10596	NM_053317	Nr0b1	Nuclear receptor subfamily 0, group B, member 1

Position	UniGene	GenBank	Symbol	Description
E08	Rn.10712	NM_057133	Nr0b2	Nuclear receptor subfamily 0, group B, member 2
E09	Rn.25840	NM_139113	Nr2f6	Nuclear receptor subfamily 2, group F, member 6
E10	Rn.90070	NM_012576	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
E11	Rn.42941	NM_021742	Nr5a2	Nuclear receptor subfamily 5, group A, member 2
E12	Rn.198927	NM_001100560	Nrip1	Nuclear receptor interacting protein 1
F01	Rn.10815	NM_145098	Nrp1	Neuropilin 1
F02	Rn.19842	NM_031712	Pdzk1	PDZ domain containing 1
F03	Rn.11628	NM_001024270	Pelp1	Proline, glutamate and leucine rich protein 1
F04	Rn.10303	NM_022847	Pgr	Progesterone receptor
F05	Rn.64535	NM_001013035	Phb2	Prohibitin 2
F06	Rn.105585	NM_053566	Ptch1	Patched homolog 1 (Drosophila)
F07	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F08	Rn.100380	NM_031093	Rala	V-ral simian leukemia viral oncogene homolog A (ras related)
F09	Rn.91057	NM_031528	Rara	Retinoic acid receptor, alpha
F10	Rn.3233	NM_053485	S100a6	S100 calcium binding protein A6
F11	Rn.88640	NM_022394	Safb	Scaffold attachment factor B
F12	Rn.8008	NM_053805	Snai1	Snail homolog 1 (Drosophila)
G01	Rn.127801	NM_053565	Socs3	Suppressor of cytokine signaling 3
G02	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
G03	Rn.10715	NM_057129	Tff1	Trefoil factor 1
G04	Rn.9952	NM_012671	Tgfa	Transforming growth factor alpha
G05	Rn.7018	NM_013174	Tgfb3	Transforming growth factor, beta 3
G06	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G07	Rn.10911	NM_017058	Vdr	Vitamin D (1,25- dihydroxyvitamin D3) receptor
G08	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G09	Rn.53991	NM_031590	Wisp2	WNT1 inducible signaling pathway protein 2
G10	Rn.34782	NM_053402	Wnt4	Wingless-type MMTV integration site family, member 4
G11	Rn.48749	NM_022631	Wnt5a	Wingless-type MMTV integration site family, member 5A
G12	Rn.101044	NM_001004210	Xbp1	X-box binding protein 1
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

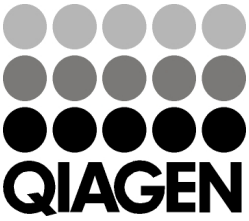
* Larger kit sizes available; please inquire.

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.

www.qiagen.com

Australia ▪ 1-800-243-800
Austria ▪ 0800/281010
Belgium ▪ 0800-79612
Brazil ▪ 0800-557779
Canada ▪ 800-572-9613
China ▪ 8621-3865-3865
Denmark ▪ 80-885945
Finland ▪ 0800-914416
France ▪ 01-60-920-930
Germany ▪ 02103-29-12000
Hong Kong ▪ 800 933 965
Ireland ▪ 1800 555 049
Italy ▪ 800-787980
Japan ▪ 03-6890-7300
Korea (South) ▪ 080-000-7145
Luxembourg ▪ 8002 2076
Mexico ▪ 01-800-7742-436
The Netherlands ▪ 0800 0229592
Norway ▪ 800-18859
Singapore ▪ 1800-742-4368
Spain ▪ 91-630-7050
Sweden ▪ 020-790282
Switzerland ▪ 055-254-22-11
UK ▪ 01293-422-911
USA ▪ 800-426-8157



Sample & Assay Technologies