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

Mouse Estrogen Receptor Signaling

Cat. no. 330231 PAMM-005ZA

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 Mouse 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 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	Adora1	Ahr	Akap1	Apbb1	Bcar1	Bcl2l1	Bdnf	Bmp4	Bmp7	Brca1	C3	Cav1
B	Ccl12	Ccnd1	Cited2	Ckb	Ctgf	Ctsd	Cyp19a1	Cyp1a1	Ebag9	Efna5	Egr3	Erbb2
C	Erbb3	Esr1	Esr2	Fos	Foxa1	Fst	G6pdx	Hsp90aa1	Igf1	Igfbp4	Igfbp5	Irs1
D	Junb	Klkb1	L1cam	Lgals1	Lpl	Ltbp1	Maff	Med1	Mmp9	Mta1	Myc	Nab2
E	Ncoa1	Ncoa2	Ncoa3	Ncor1	Ncor2	Nov	Nr0b1	Nr0b2	Nr2f6	Nr3c1	Nr5a2	Nrip1
F	Nrp1	Pdzk1	Pelp1	Pgr	Phb2	Ptch1	Ptgs2	Rala	Rara	S100a6	Safb	Snai1
G	Socs3	Spp1	Tff1	Tgfa	Tgfb3	Thbs1	Vdr	Vegfa	Wisp2	Wnt4	Wnt5a	Xbp1
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.298908	NM_001008533	Adora1	Adenosine A1 receptor
A02	Mm.341377	NM_013464	Ahr	Aryl-hydrocarbon receptor
A03	Mm.2969	NM_009648	Akap1	A kinase (PRKA) anchor protein 1
A04	Mm.38469	NM_009685	Apbb1	Amyloid beta (A4) precursor protein-binding, family B, member 1
A05	Mm.3758	NM_009954	Bcar1	Breast cancer anti-estrogen resistance 1
A06	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A07	Mm.1442	NM_007540	Bdnf	Brain derived neurotrophic factor
A08	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
A09	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
A10	Mm.244975	NM_009764	Brca1	Breast cancer 1
A11	Mm.19131	NM_009778	C3	Complement component 3
A12	Mm.28278	NM_007616	Cav1	Caveolin 1, caveolae protein
B01	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
B02	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B03	Mm.272321	NM_010828	Cited2	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2
B04	Mm.16831	NM_021273	Ckb	Creatine kinase, brain
B05	Mm.390287	NM_010217	Ctgf	Connective tissue growth factor
B06	Mm.231395	NM_009983	Ctsd	Cathepsin D
B07	Mm.5199	NM_007810	Cyp19a1	Cytochrome P450, family 19, subfamily a, polypeptide 1
B08	Mm.14089	NM_009992	Cyp1a1	Cytochrome P450, family 1, subfamily a, polypeptide 1
B09	Mm.477528	NM_019480	Ebag9	Estrogen receptor-binding fragment-associated gene 9
B10	Mm.401670	NM_010109	Efna5	Ephrin A5
B11	Mm.103737	NM_018781	Egr3	Early growth response 3
B12	Mm.290822	NM_001003817	Erbb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
C01	Mm.373043	NM_010153	Erbb3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
C02	Mm.9213	NM_007956	Esr1	Estrogen receptor 1 (alpha)
C03	Mm.2561	NM_010157	Esr2	Estrogen receptor 2 (beta)
C04	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
C05	Mm.4578	NM_008259	Foxa1	Forkhead box A1
C06	Mm.4913	NM_008046	Fst	Follistatin
C07	Mm.27210	NM_008062	G6pdx	Glucose-6-phosphate dehydrogenase X-linked
C08	Mm.1843	NM_010480	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
C09	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
C10	Mm.233799	NM_010517	Igfbp4	Insulin-like growth factor binding protein 4
C11	Mm.405761	NM_010518	Igfbp5	Insulin-like growth factor binding protein 5
C12	Mm.4952	NM_010570	Irs1	Insulin receptor substrate 1
D01	Mm.1167	NM_008416	Junb	Jun-B oncogene
D02	Mm.482691	NM_008455	Klkb1	Kallikrein B, plasma 1
D03	Mm.260568	NM_008478	L1cam	L1 cell adhesion molecule
D04	Mm.43831	NM_008495	Lgals1	Lectin, galactose binding, soluble 1
D05	Mm.1514	NM_008509	Lpl	Lipoprotein lipase
D06	Mm.269747	NM_019919	Ltbp1	Latent transforming growth factor beta binding protein 1
D07	Mm.86646	NM_010755	Maff	V-maf musculoaponeurotic fibrosarcoma oncogene family, protein F (avian)

Position	UniGene	GenBank	Symbol	Description
D08	Mm.12926	NM_013634	Med1	Mediator complex subunit 1
D09	Mm.4406	NM_013599	Mmp9	Matrix metallopeptidase 9
D10	Mm.212577	NM_054081	Mta1	Metastasis associated 1
D11	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
D12	Mm.336898	NM_008668	Nab2	Ngfi-A binding protein 2
E01	Mm.301039	NM_010881	Ncoa1	Nuclear receptor coactivator 1
E02	Mm.2537	NM_008678	Ncoa2	Nuclear receptor coactivator 2
E03	Mm.476883	NM_008679	Ncoa3	Nuclear receptor coactivator 3
E04	Mm.271814	NM_011308	Ncor1	Nuclear receptor co-repressor 1
E05	Mm.278646	NM_011424	Ncor2	Nuclear receptor co-repressor 2
E06	Mm.5167	NM_010930	Nov	Nephroblastoma overexpressed gene
E07	Mm.5180	NM_007430	Nr0b1	Nuclear receptor subfamily 0, group B, member 1
E08	Mm.346759	NM_011850	Nr0b2	Nuclear receptor subfamily 0, group B, member 2
E09	Mm.28989	NM_010150	Nr2f6	Nuclear receptor subfamily 2, group F, member 6
E10	Mm.129481	NM_008173	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
E11	Mm.16794	NM_030676	Nr5a2	Nuclear receptor subfamily 5, group A, member 2
E12	Mm.74711	NM_173440	Nrip1	Nuclear receptor interacting protein 1
F01	Mm.271745	NM_008737	Nrp1	Neuropilin 1
F02	Mm.482226	NM_021517	Pdzk1	PDZ domain containing 1
F03	Mm.340601	NM_029231	Pelp1	Proline, glutamic acid and leucine rich protein 1
F04	Mm.12798	NM_008829	Pgr	Progesterone receptor
F05	Mm.36241	NM_007531	Phb2	Prohibitin 2
F06	Mm.228798	NM_008957	Ptch1	Patched homolog 1
F07	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F08	Mm.27348	NM_019491	Rala	V-ral simian leukemia viral oncogene homolog A (ras related)
F09	Mm.439744	NM_009024	Rara	Retinoic acid receptor, alpha
F10	Mm.100144	NM_011313	S100a6	S100 calcium binding protein A6 (calcyclin)
F11	Mm.255066	NM_001163300	Safb	Scaffold attachment factor B
F12	Mm.2093	NM_011427	Snai1	Snail homolog 1 (Drosophila)
G01	Mm.3468	NM_007707	Socs3	Suppressor of cytokine signaling 3
G02	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
G03	Mm.2854	NM_009362	Tff1	Trefoil factor 1
G04	Mm.137222	NM_031199	Tgfa	Transforming growth factor alpha
G05	Mm.3992	NM_009368	Tgfb3	Transforming growth factor, beta 3
G06	Mm.4159	NM_011580	Thbs1	Thrombospondin 1
G07	Mm.245084	NM_009504	Vdr	Vitamin D receptor
G08	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G09	Mm.13828	NM_016873	Wisp2	WNT1 inducible signaling pathway protein 2
G10	Mm.20355	NM_009523	Wnt4	Wingless-related MMTV integration site 4
G11	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
G12	Mm.469937	NM_013842	Xbp1	X-box binding protein 1
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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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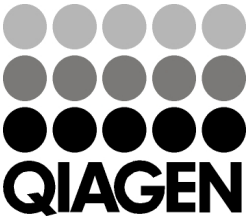

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