RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Female Infertility

Cat. no. 330231 PAMM-164ZR

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 Mouse Female Infertility RT² Profiler PCR Array profiles the expression of 84 key genes involved in endometrial changes in early pregnancy. During each human menstrual cycle, the uterine endometrial layer prepares for a pregnancy while one ovary releases a mature oocyte. If the oocyte is fertilized, it will begin to divide as it travels through the fallopian tube and into the uterus. The endometrium must undergo significant gene expression changes, required for successful embryonic implantation. These changes involve signaling pathways such as interleukin-1, WNT, and prostaglandins, as well as biological processes such as apoptosis, cell cycle regulation, and leukocyte migration into the receptive endometrium. The endometrium is only receptive to the embryo for 3–5 days per menstrual cycle, called the window of implantation. A large number of couples suffer from infertility, although there are now many assisted reproductive technologies that can achieve a viable pregnancy. While these technologies, such as in vitro fertilization (IVF), can identify the most promising embryos, more than half of IVF embryos fail to implant. A shorter or nonexistent window of implantation may explain this phenomenon for some infertile women. Many microarray studies have been published identifying endometrial gene expression changes during the window of implantation, as well as a comparison of fertile and infertile women. Additional studies are still required to identify the underlying molecular mechanisms of this complex process, potentially determined by monitoring expression of the key genes included on this array. A set of controls present on each array enables data analysis using the ΔΔCT method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in embryonic implantation and female infertility 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	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A02	Mm.238343	NM_007585	Anxa2	Annexin A2
A03	Mm.2082	NM_007470	Apod	Apolipoprotein D
A04	Mm.39005	NM_013476	Ar	Androgen receptor
A05	Mm.8039	NM_009704	Areg	Amphiregulin
A06	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A07	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A08	Mm.283217	NM_013484	C2	Complement component 2 (within H-2S)
A09	Mm.19131	NM_009778	C3	Complement component 3
A10	Mm.4361	NM_007587	Calca	Calcitonin/calcitonin-related polypeptide, alpha
A11	Mm.34405	NM_009810	Casp3	Caspase 3
A12	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B01	Mm.260114	NM_172301	Ccnb1	Cyclin B1
B02	Mm.101591	NM_010016	Cd55	CD55 antigen
B03	Mm.35605	NM_009864	Cdh1	Cadherin 1
B04	Mm.4407	NM_013459	Cfd	Complement factor D (adipsin)
B05	Mm.7339	NM_009903	Cldn4	Claudin 4
B06	Mm.45071	NM_016685	Comp	Cartilage oligomeric matrix protein
B07	Mm.4757	NM_007759	Crabp2	Cellular retinoic acid binding protein II
B08	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B09	Mm.291928	NM_007614	Ctnnb1	Catenin (cadherin associated protein), beta 1
B10	Mm.303231	NM_021704	Cxcl12	Chemokine (C-X-C motif) ligand 12
B11	Mm.214717	NM_010051	Dkk1	Dickkopf homolog 1 (Xenopus laevis)
B12	Mm.252481	NM_010113	Egf	Epidermal growth factor
C01	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
C02	Mm.9213	NM_007956	Esr1	Estrogen receptor 1 (alpha)
C03	Mm.2561	NM_010157	Esr2	Estrogen receptor 2 (beta)
C04	Mm.273188	NM_010171	F3	Coagulation factor III
C05	Mm.271644	NM_007993	Fbn1	Fibrillin 1
C06	Mm.193099	NM_010233	Fn1	Fibronectin 1
C07	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha
C08	Mm.4767	NM_010257	Gast	Gastrin
C09	Mm.31325	NM_011819	Gdf15	Growth differentiation factor 15
C10	Mm.200916	NM_008161	Gpx3	Glutathione peroxidase 3
C11	Mm.289681	NM_010415	Hbegf	Heparin-binding EGF-like growth factor
C12	Mm.5	NM_008263	Hoxa10	Homeobox A10
D01	Mm.26954	NM_010450	Hoxa11	Homeobox A11
D02	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
D03	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
D04	Mm.21300	NM_008341	Igfbp1	Insulin-like growth factor binding protein 1
D05	Mm.35814	NM_008350	Il11	Interleukin 11
D06	Mm.4392	NM_008357	Il15	Interleukin 15
D07	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
D08	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
D09	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type I
D10	Mm.1019	NM_031168	Il6	Interleukin 6
D11	Mm.31903	NM_010576	Itga4	Integrin alpha 4
D12	Mm.227	NM_008402	Itgav	Integrin alpha V
E01	Mm.87150	NM_016780	Itgb3	Integrin beta 3
E02	Mm.285	NM_010612	Kdr	Kinase insert domain protein receptor
E03	Mm.303386	NM_008480	Lama1	Laminin, alpha 1
E04	Mm.329272	NM_008485	Lamc2	Laminin, gamma 2
E05	Mm.277072	NM_008493	Lep	Leptin
E06	Mm.4964	NM_008501	Lif	Leukemia inhibitory factor
E07	Mm.149720	NM_013584	Lifr	Leukemia inhibitory factor receptor
E08	Mm.21108	NM_173740	Maoa	Monoamine oxidase A
E09	Mm.34441	NM_010797	Mid1	Midline 1

Position	UniGene	GenBank	Symbol	Description
E10	Mm.4078	NM_001081117	Mki67	Antigen identified by monoclonal antibody Ki 67
E11	Mm.29564	NM_008610	Mmp2	Matrix metallopeptidase 2
E12	Mm.4825	NM_010810	Mmp7	Matrix metallopeptidase 7
F01	Mm.4406	NM_013599	Mmp9	Matrix metallopeptidase 9
F02	Mm.256509	NM_010835	Msx1	Homeobox, msh-like 1
F03	Mm.16193	NM_013605	Muc1	Mucin 1, transmembrane
F04	Mm.43278	NM_019498	Olfm1	Olfactomedin 1
F05	Mm.7141	NM_011045	Pcna	Proliferating cell nuclear antigen
F06	Mm.4809	NM_008827	Pgf	Placental growth factor
F07	Mm.12798	NM_008829	Pgr	Progesterone receptor
F08	Mm.1270	NM_011164	Prl	Prolactin
F09	Mm.275434	NM_008969	Ptgs1	Prostaglandin-endoperoxide synthase 1
F10	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F11	Mm.1461	NM_011346	Sell	Selectin, lymphocyte
F12	Mm.42095	NM_016687	Sfrp4	Secreted frizzled-related protein 4
G01	Mm.276325	NM_011434	Sod1	Superoxide dismutase 1, soluble
G02	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
G03	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G04	Mm.378957	NM_019641	Stmn1	Stathmin 1
G05	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G06	Mm.8245	NM_011593	Timp1	Tissue inhibitor of metalloproteinase 1
G07	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G08	Mm.193430	NM_020275	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b
G09	Mm.222	NM_011640	Trp53	Transformation related protein 53
G10	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G11	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G12	Mm.33653	NM_023653	Wnt2	Wingless-related MMTV integration site 2
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 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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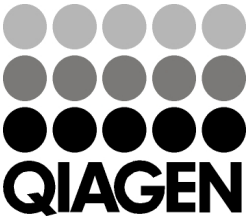

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