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

Rat Pre-Eclampsia

Cat. no. 330231 PARN-163ZA

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™

QIAGEN®

Sample & Assay Technologies

Description

The Rat Pre-Eclampsia RT² Profiler PCR Array profiles the expression of 84 key genes involved in dysregulation of placental development. Pre-eclampsia, a life-threatening disease, presents with high blood pressure during pregnancy, and delivery of the placenta provides the only cure. This disease is considered early-onset if the pregnancy is less than 32 weeks, and is otherwise called late-onset. The causes of pre-eclampsia are not entirely understood. Many patients show poor placental implantation, suggesting that pre-eclampsia begins very early in pregnancy, even though the symptoms only arise later. A potential molecular mechanism involves defective vascular remodeling by trophoblasts early in placental development. As the disease progresses, the placenta may become hypoxic, causing inflammation and oxidative stress. These processes result in the infiltration of immune cells such as T helper 1 (Th1) cells, neutrophils, and natural killer cells. A similar process results in intrauterine growth retardation, or insufficient fetal growth. Active areas of pre-eclampsia research include the effort to identify women with a high risk of pre-eclampsia during their pregnancy. In addition, research determining the key genes involved in pre-eclampsia may lead to novel therapeutic targets to inhibit or reverse the condition. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in pre-eclampsia 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	Abcc1	Abcg2	Adm	Agtr1a	Angpt2	Apln	Atp1b1	Atp2a2	Bcl6	Bhlhe40	C3	Cav1
B	Ccl12	Cd40lg	Cdh13	Cfd	Clu	Col14a1	Cp	Crh	Crhbp	Cxcl10	Cxcl9	Cxcr4
C	Cyp26a1	Cyr61	Dcn	Dusp1	Edn1	F5	Fabp4	Flt1	Flt4	Fstl3	Hbegf	Hgf
D	Hif1a	Hp	Hsd17b1	Hsp90aa1	Htr3a	Htra1	Ifng	Igf1	Igfbp3	Il10	Il11	Il15
E	Il18	Il1a	Il2	Il6	Inha	Inhba	Itgb3	Kit	Krt19	Lep	Lpl	Mas1
F	Mmp12	Mmp9	Ncam1	Ndrg1	Nos3	Ntrk2	Pdgfd	Pgf	Pgr	RGD1562284	RT1-M3-1	Serpina3n
G	Sod1	Spp1	Stat1	Tac1	Tac2	Tek	Tgfb1	Timp1	Tnf	Trem1	Vcan	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.10495	NM_022281	Abcc1	ATP-binding cassette, subfamily C (CFTR/MRP), member 1
A02	Rn.13131	NM_181381	Abcg2	ATP-binding cassette, subfamily G (WHITE), member 2
A03	Rn.10232	NM_012715	Adm	Adrenomedullin
A04	Rn.9814	NM_030985	Agtr1a	Angiotensin II receptor, type 1a
A05	Rn.138360	NM_134454	Angpt2	Angiopoietin 2
A06	Rn.22847	NM_031612	Apln	Apelin
A07	Rn.8925	NM_013113	Atp1b1	ATPase, Na+/K+ transporting, beta 1 polypeptide
A08	Rn.2305	NM_001110139	Atp2a2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
A09	Rn.20571	NM_001107084	Bcl6	B-cell CLL/lymphoma 6
A10	Rn.81055	NM_053328	Bhlhe40	Basic helix-loop-helix family, member e40
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.44218	NM_053353	Cd40lg	CD40 ligand
B03	Rn.23806	NM_138889	Cdh13	Cadherin 13
B04	Rn.16172	NM_001077642	Cfd	Complement factor D (adipsin)
B05	Rn.1780	NM_053021	Clu	Clusterin
B06	Rn.99441	NM_001130548	Col14a1	Collagen, type XIV, alpha 1
B07	Rn.32777	NM_012532	Cp	Ceruloplasmin
B08	Rn.10349	NM_031019	Crh	Corticotropin releasing hormone
B09	Rn.34568	NM_139183	Crhbp	Corticotropin releasing hormone binding protein
B10	Rn.10584	NM_139089	Cxcl10	Chemokine (C-X-C motif) ligand 10
B11	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
B12	Rn.44431	NM_022205	Cxcr4	Chemokine (C-X-C motif) receptor 4
C01	Rn.81072	NM_130408	Cyp26a1	Cytochrome P450, family 26, subfamily A, polypeptide 1
C02	Rn.22129	NM_031327	Cyr61	Cysteine-rich, angiogenic inducer, 61
C03	Rn.106103	NM_024129	Dcn	Decorin
C04	Rn.98260	NM_053769	Dusp1	Dual specificity phosphatase 1
C05	Rn.10918	NM_012548	Edn1	Endothelin 1
C06	Rn.82910	NM_001047878	F5	Coagulation factor V (proaccelerin, labile factor)
C07	Rn.4258	NM_053365	Fabp4	Fatty acid binding protein 4, adipocyte
C08	Rn.10239	NM_019306	Flt1	Fms-related tyrosine kinase 1
C09	Rn.81043	NM_053652	Flt4	Fms-related tyrosine kinase 4
C10	Rn.48835	NM_053629	Fstl3	Follistatin-like 3 (secreted glycoprotein)
C11	Rn.10148	NM_012945	Hbegf	Heparin-binding EGF-like growth factor
C12	Rn.10468	NM_017017	Hgf	Hepatocyte growth factor
D01	Rn.10852	NM_024359	Hif1a	Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D02	Rn.10950	NM_012582	Hp	Haptoglobin
D03	Rn.10594	NM_012851	Hsd17b1	Hydroxysteroid (17-beta) dehydrogenase 1
D04	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
D05	Rn.55109	NM_024394	Htr3a	5-hydroxytryptamine (serotonin) receptor 3a
D06	Rn.2782	NM_031721	Htra1	HtrA serine peptidase 1
D07	Rn.10795	NM_138880	Ifng	Interferon gamma
D08	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1

Position	UniGene	GenBank	Symbol	Description
D09	Rn.26369	NM_012588	Igfbp3	Insulin-like growth factor binding protein 3
D10	Rn.9868	NM_012854	Il10	Interleukin 10
D11	Rn.198483	NM_133519	Il11	Interleukin 11
D12	Rn.2490	NM_013129	Il15	Interleukin 15
E01	Rn.11118	NM_019165	Il18	Interleukin 18
E02	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
E03	Rn.9871	NM_053836	Il2	Interleukin 2
E04	Rn.9873	NM_012589	Il6	Interleukin 6
E05	Rn.8831	NM_012590	Inha	Inhibin alpha
E06	Rn.9874	NM_017128	Inhba	Inhibin beta-A
E07	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
E08	Rn.54004	NM_022264	Kit	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E09	Rn.9359	NM_199498	Krt19	Keratin 19
E10	Rn.44444	NM_013076	Lep	Leptin
E11	Rn.3834	NM_012598	Lpl	Lipoprotein lipase
E12	Rn.21943	NM_012757	Mas1	MAS1 oncogene
F01	Rn.33193	NM_053963	Mmp12	Matrix metallopeptidase 12
F02	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
F03	Rn.11283	NM_031521	Ncam1	Neural cell adhesion molecule 1
F04	Rn.153992	NM_001011991	Ndrg1	N-myc downstream regulated 1
F05	Rn.44265	NM_021838	Nos3	Nitric oxide synthase 3, endothelial cell
F06	Rn.11246	NM_012731	Ntrk2	Neurotrophic tyrosine kinase, receptor, type 2
F07	Rn.64493	NM_023962	Pdgfd	Platelet-derived growth factor, D polypeptide
F08	Rn.6960	NM_053595	Pgf	Placental growth factor
F09	Rn.10303	NM_022847	Pgr	Progesterone receptor
F10	Rn.7474	NM_001134557	RGD1562284	Similar to Glutaminyl-peptide cyclotransferase precursor (QC)
F11	Rn.92606	NM_022921	RT1-M3-1	RT1 class Ib, locus M3, gene 1
F12	Rn.202939	NM_031531	Serpina3n	Serine (or cysteine) peptidase inhibitor, clade A, member 3N
G01	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G02	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
G03	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G04	Rn.1920	NM_012666	Tac1	Tachykinin 1
G05	Rn.9708	NM_019162	Tac2	Tachykinin 2
G06	Rn.9159	NM_001105737	Tek	TEK tyrosine kinase, endothelial
G07	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G08	Rn.25754	NM_053819	Timp1	TIMP metallopeptidase inhibitor 1
G09	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G10	Rn.86337	NM_001106885	Trem1	Triggering receptor expressed on myeloid cells 1
G11	Rn.35666	XM_215451	Vcan	Versican
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

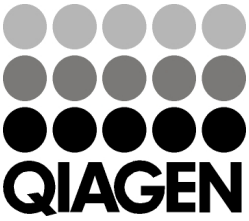
* Larger kit sizes available; please inquire.

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.

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