

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

Human Pre-Eclampsia

Cat. no. 330231 PAHS-163ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² 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
RT ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Human 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	AGTR1	ANGPT2	APLN	ATP1B1	ATP2A2	BCL6	BHLHE40	C3	CAV1
B	CCL2	CD40LG	CDH13	CFD	CLU	COL14A1	CP	CRH	CRHBP	CXCL10	CXCL9	CYP26A1
C	DCN	DUSP1	EDN1	ENG	F5	FABP4	FLT1	FLT4	FSTL3	HBEGF	HGF	HIF1A
D	HLA-G	HP	HSD17B1	HSP90AA1	HTR3A	HTRA1	IFNG	IGF1	IGFBP3	IL10	IL11	IL15
E	IL18	IL1A	IL2	IL6	IL8	INHA	INHBA	ITGB3	KIT	KRT19	LEP	LPL
F	MAS1	MMP12	MMP9	NCAM1	NDRG1	NOS3	NTRK2	PAPPA2	PDGFD	PGF	PGR	QPCT
G	SERPINA3	SOD1	SPP1	STAT1	TAC1	TAC3	TEK	TGFB1	TNF	TREM1	VCAN	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.709181	NM_004996	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A02	Hs.480218	NM_004827	ABCG2	ATP-binding cassette, sub-family G (WHITE), member 2
A03	Hs.441047	NM_001124	ADM	Adrenomedullin
A04	Hs.728754	NM_031850	AGTR1	Angiotensin II receptor, type 1
A05	Hs.583870	NM_001147	ANGPT2	Angiopoietin 2
A06	Hs.303084	NM_017413	APLN	Apelin
A07	Hs.291196	NM_001677	ATP1B1	ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide
A08	Hs.506759	NM_001681	ATP2A2	ATPase, Ca ⁺⁺ transporting, cardiac muscle, slow twitch 2
A09	Hs.478588	NM_001706	BCL6	B-cell CLL/lymphoma 6
A10	Hs.728782	NM_003670	BHLHE40	Basic helix-loop-helix family, member e40
A11	Hs.529053	NM_000064	C3	Complement component 3
A12	Hs.74034	NM_001753	CAV1	Caveolin 1, caveolae protein, 22kDa
B01	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
B02	Hs.592244	NM_000074	CD40LG	CD40 ligand
B03	Hs.654386	NM_001257	CDH13	Cadherin 13, H-cadherin (heart)
B04	Hs.155597	NM_001928	CFD	Complement factor D (adipsin)
B05	Hs.436657	NM_001831	CLU	Clusterin
B06	Hs.409662	NM_021110	COL14A1	Collagen, type XIV, alpha 1
B07	Hs.558314	NM_000096	CP	Ceruloplasmin (ferroxidase)
B08	Hs.75294	NM_000756	CRH	Corticotropin releasing hormone
B09	Hs.115617	NM_001882	CRHBP	Corticotropin releasing hormone binding protein
B10	Hs.632586	NM_001565	CXCL10	Chemokine (C-X-C motif) ligand 10
B11	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
B12	Hs.150595	NM_000783	CYP26A1	Cytochrome P450, family 26, subfamily A, polypeptide 1
C01	Hs.728830	NM_001920	DCN	Decorin
C02	Hs.171695	NM_004417	DUSP1	Dual specificity phosphatase 1
C03	Hs.511899	NM_001955	EDN1	Endothelin 1
C04	Hs.76753	NM_000118	ENG	Endoglin
C05	Hs.30054	NM_000130	F5	Coagulation factor V (proaccelerin, labile factor)
C06	Hs.391561	NM_001442	FABP4	Fatty acid binding protein 4, adipocyte
C07	Hs.654360	NM_002019	FLT1	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
C08	Hs.646917	NM_002020	FLT4	Fms-related tyrosine kinase 4
C09	Hs.529038	NM_005860	FSTL3	Follistatin-like 3 (secreted glycoprotein)
C10	Hs.799	NM_001945	HBEGF	Heparin-binding EGF-like growth factor
C11	Hs.396530	NM_000601	HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)
C12	Hs.597216	NM_001530	HIF1A	Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D01	Hs.512152	NM_002127	HLA-G	Major histocompatibility complex, class I, G
D02	Hs.513711	NM_005143	HP	Haptoglobin
D03	Hs.654385	NM_000413	HSD17B1	Hydroxysteroid (17-beta) dehydrogenase 1
D04	Hs.525600	NM_001017963	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1
D05	Hs.413899	NM_000869	HTR3A	5-hydroxytryptamine (serotonin) receptor 3A
D06	Hs.501280	NM_002775	HTRA1	Htra serine peptidase 1
D07	Hs.856	NM_000619	IFNG	Interferon, gamma

Position	UniGene	GenBank	Symbol	Description
D08	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
D09	Hs.450230	NM_000598	IGFBP3	Insulin-like growth factor binding protein 3
D10	Hs.193717	NM_000572	IL10	Interleukin 10
D11	Hs.467304	NM_000641	IL11	Interleukin 11
D12	Hs.654378	NM_000585	IL15	Interleukin 15
E01	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
E02	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
E03	Hs.89679	NM_000586	IL2	Interleukin 2
E04	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
E05	Hs.624	NM_000584	IL8	Interleukin 8
E06	Hs.407506	NM_002191	INHBA	Inhibin, alpha
E07	Hs.583348	NM_002192	INHBA	Inhibin, beta A
E08	Hs.218040	NM_000212	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
E09	Hs.479754	NM_000222	KIT	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E10	Hs.654568	NM_002276	KRT19	Keratin 19
E11	Hs.194236	NM_000230	LEP	Leptin
E12	Hs.180878	NM_000237	LPL	Lipoprotein lipase
F01	Hs.99900	NM_002377	MAS1	MAS1 oncogene
F02	Hs.1695	NM_002426	MMP12	Matrix metalloproteinase 12 (macrophage elastase)
F03	Hs.297413	NM_004994	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F04	Hs.503878	NM_000615	NCAM1	Neural cell adhesion molecule 1
F05	Hs.372914	NM_006096	NDRG1	N-myc downstream regulated 1
F06	Hs.707978	NM_000603	NOS3	Nitric oxide synthase 3 (endothelial cell)
F07	Hs.494312	NM_006180	NTRK2	Neurotrophic tyrosine kinase, receptor, type 2
F08	Hs.187284	NM_021936	PAPPA2	Pappalysin 2
F09	Hs.352298	NM_025208	PDGFD	Platelet derived growth factor D
F10	Hs.252820	NM_002632	PGF	Placental growth factor
F11	Hs.32405	NM_000926	PGR	Progesterone receptor
F12	Hs.79033	NM_012413	QPCT	Glutaminyl-peptide cyclotransferase
G01	Hs.534293	NM_001085	SERPINA3	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3
G02	Hs.443914	NM_000454	SOD1	Superoxide dismutase 1, soluble
G03	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1
G04	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
G05	Hs.2563	NM_013998	TAC1	Tachykinin, precursor 1
G06	Hs.9730	NM_013251	TAC3	Tachykinin 3
G07	Hs.89640	NM_000459	TEK	TEK tyrosine kinase, endothelial
G08	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
G09	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G10	Hs.283022	NM_018643	TREM1	Triggering receptor expressed on myeloid cells 1
G11	Hs.643801	NM_004385	VCAN	Versican
G12	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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
RT ² 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
RT ² 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.

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