

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

Rat Endothelial Cell Biology

Cat. no. 330231 PARN-015ZA

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 Rat Endothelial Cell Biology RT² Profiler PCR Array profiles the expression of 84 genes related to endothelial cell biology. Endothelial cells play a critical role in the progression of disease processes including inflammation, atherosclerosis, and tumor angiogenesis. This array includes genes involved in permissibility and vessel tone, angiogenesis, endothelial cell activation and endothelial cell injury. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the atherosclerosis 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	Ace	Adam17	Agt	Agtr1b	Angpt1	Anxa5	ApoE	Bax	Bcl2	Bcl2l1	Calca	Casp1
B	Casp3	Cav1	Ccl2	Ccl5	Cdh5	Cflar	Col18a1	Cx3cl1	Cxcl1	Cxcl2	Cxcr5	Edn1
C	Edn2	Ednra	Eng	F2r	F3	Fas	Faslg	Fgf1	Fgf2	Flt1	Fn1	Hif1a
D	Hmox1	Icam1	Il11	Il1b	Il3	Il6	Il7	Itga5	Itgav	Itgb1	Itgb3	Kdr
E	Kit	Mmp1a	Mmp2	Mmp9	Nos3	Nppb	Npr1	Ocln	Pdgfra	Pecam1	Pf4	Pgf
F	Plat	Plau	Plg	Plgis	Plgs2	Plk2	Sele	Sell	Selp	Serpine1	Sod1	Tek
G	Tlpi	Tgfb1	Thbd	Thbs1	Timp1	Tnf	Tnfrsf10	Tymp	Vcam1	Vegfa	Vwf	Xdh
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.10149	NM_012544	Ace	Angiotensin I converting enzyme (peptidyl-dipeptidase A) 1
A02	Rn.144585	NM_020306	Adam17	ADAM metalloproteinase domain 17
A03	Rn.6319	NM_134432	Agt	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A04	Rn.9815	NM_031009	Agtr1b	Angiotensin II receptor, type 1b
A05	Rn.161953	NM_053546	Angpt1	Angiopietin 1
A06	Rn.3318	NM_013132	Anxa5	Annexin A5
A07	Rn.32351	NM_138828	ApoE	Apolipoprotein E
A08	Rn.10668	NM_017059	Bax	Bcl2-associated X protein
A09	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A10	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A11	Rn.90085	NM_017338	Calca	Calcitonin-related polypeptide alpha
A12	Rn.37508	NM_012762	Casp1	Caspase 1
B01	Rn.10562	NM_012922	Casp3	Caspase 3
B02	Rn.22518	NM_031556	Cav1	Caveolin 1, caveolae protein
B03	Rn.4772	NM_031530	Ccl2	Chemokine (C-C motif) ligand 2
B04	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
B05	Rn.164510	NM_001107407	Cdh5	Cadherin 5
B06	Rn.204752	NM_057138	Cflar	CASP8 and FADD-like apoptosis regulator
B07	Rn.12030	XM_241632	Col18a1	Collagen, type XVIII, alpha 1
B08	Rn.107266	NM_134455	Cx3cl1	Chemokine (C-X3-C motif) ligand 1
B09	Rn.10907	NM_030845	Cxcl1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
B10	Rn.10230	NM_053647	Cxcl2	Chemokine (C-X-C motif) ligand 2
B11	Rn.127121	NM_053303	Cxcr5	Chemokine (C-X-C motif) receptor 5
B12	Rn.10918	NM_012548	Edn1	Endothelin 1
C01	Rn.10642	NM_012549	Edn2	Endothelin 2
C02	Rn.10915	NM_012550	Ednra	Endothelin receptor type A
C03	Rn.187025	NM_001010968	Eng	Endoglin
C04	Rn.2609	NM_012950	F2r	Coagulation factor II (thrombin) receptor
C05	Rn.9980	NM_013057	F3	Coagulation factor III (thromboplastin, tissue factor)
C06	Rn.162521	NM_139194	Fas	Fas (TNF receptor superfamily, member 6)
C07	Rn.9725	NM_012908	Faslg	Fas ligand (TNF superfamily, member 6)
C08	Rn.88013	NM_012846	Fgf1	Fibroblast growth factor 1
C09	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
C10	Rn.10239	NM_019306	Flt1	Fms-related tyrosine kinase 1
C11	Rn.1604	NM_019143	Fn1	Fibronectin 1
C12	Rn.10852	NM_024359	Hif1a	Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
D01	Rn.3160	NM_012580	Hmox1	Heme oxygenase (decycling) 1
D02	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
D03	Rn.198483	NM_133519	Il11	Interleukin 11
D04	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D05	Rn.10652	NM_031513	Il3	Interleukin 3
D06	Rn.9873	NM_012589	Il6	Interleukin 6
D07	Rn.10793	NM_013110	Il7	Interleukin 7
D08	Rn.100796	NM_001108118	Itga5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)

Position	UniGene	GenBank	Symbol	Description
D09	Rn.23339	NM_001106549	Itgav	Integrin, alpha V
D10	Rn.25733	NM_017022	Itgb1	Integrin, beta 1
D11	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
D12	Rn.88869	NM_013062	Kdr	Kinase insert domain receptor
E01	Rn.54004	NM_022264	Kit	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E02	Rn.79007	NM_001134530	Mmp1a	Matrix metalloproteinase 1a (interstitial collagenase)
E03	Rn.6422	NM_031054	Mmp2	Matrix metalloproteinase 2
E04	Rn.10209	NM_031055	Mmp9	Matrix metalloproteinase 9
E05	Rn.44265	NM_021838	Nos3	Nitric oxide synthase 3, endothelial cell
E06	Rn.3835	NM_031545	Nppb	Natriuretic peptide precursor B
E07	Rn.10463	NM_012613	Npr1	Natriuretic peptide receptor A/guanylate cyclase A (atrionatriuretic peptide receptor A)
E08	Rn.31429	NM_031329	Ocln	Occludin
E09	Rn.55127	NM_012802	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide
E10	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
E11	Rn.6800	NM_001007729	Pf4	Platelet factor 4
E12	Rn.6960	NM_053595	Pgf	Placental growth factor
F01	Rn.107102	NM_013151	Plat	Plasminogen activator, tissue
F02	Rn.6064	NM_013085	Plau	Plasminogen activator, urokinase
F03	Rn.20178	NM_053491	Plg	Plasminogen
F04	Rn.73051	NM_031557	Ptgis	Prostaglandin I2 (prostacyclin) synthase
F05	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F06	Rn.2809	NM_013081	Ptk2	PTK2 protein tyrosine kinase 2
F07	Rn.10359	NM_138879	Sele	Selectin E
F08	Rn.10461	NM_019177	Sell	Selectin L
F09	Rn.10012	NM_013114	Selp	Selectin P
F10	Rn.29367	NM_012620	Serpine1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
F11	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
F12	Rn.9159	NM_001105737	Tek	TEK tyrosine kinase, endothelial
G01	Rn.15795	NM_017200	Tfpi	Tissue factor pathway inhibitor (lipoprotein-associated coagulation inhibitor)
G02	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G03	Rn.88295	NM_031771	Thbd	Thrombomodulin
G04	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G05	Rn.25754	NM_053819	Timp1	TIMP metalloproteinase inhibitor 1
G06	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G07	Rn.83627	NM_145681	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G08	Rn.219088	NM_001012122	Tymp	Thymidine phosphorylase
G09	Rn.11267	NM_012889	Vcam1	Vascular cell adhesion molecule 1
G10	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G11	Rn.35561	XM_342759	Vwf	Von Willebrand factor
G12	Rn.202951	NM_017154	Xdh	Xanthine dehydrogenase
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.
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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