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

Rat Angiogenesis

Cat. no. 330231 PARN-024ZA

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 Rat Angiogenesis RT² Profiler PCR Array profiles the expression of 84 key genes involved in modulating the biological processes of angiogenesis. The array includes growth factors and their receptors, chemokines and cytokines, matrix and adhesion molecules, proteases and their inhibitors, as well as transcription factors, all involved in the development of new blood vessels. Angiogenesis is a hallmark in the pathology of many diseases, including cancer, ischemia, atherosclerosis, and inflammatory diseases. Angiogenesis plays additional roles in normal development and physiological processes in adults, including wound healing and tissue regeneration. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to angiogenesis 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	Akt1	Ang	Angpt1	Angpt2	Anpep	Bai1	Ccl2	Cdh5	Col18a1	Col4a3	Ctgf	Cxcl1
B	Cxcl2	Cxcl9	Edn1	Efna1	Egf	Eng	Epas1	Erbb2	F2	F3	Fgf1	Fgf2
C	Fgf6	Fgfr3	Figf	Flt1	Fn1	Hgf	Hif1a	Id1	Ifna1	Ifnb1	Ifng	Igf1
D	Il1b	Il6	Itga5	Itgav	Itgb3	Jag1	Kdr	Lect1	Lep	Mapk14	Mdk	Mmp14
E	Mmp19	Mmp2	Mmp3	Mmp9	Nos3	Nrp1	Nrp2	Pdgfa	Pdgfb	Pecam1	Pgf	Plau
F	Plg	Ptgs1	Ptk2	S1pr1	Serpinb5	Serpine1	Serpinf1	Sphk1	Tek	Tgfa	Tgfb1	Tgfb2
G	Tgfb3	Tgfbr1	Thbs1	Tie1	Timp1	Timp2	Timp3	Tnf	Tymp	Vegfa	Vegfb	Vegfc
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.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A02	Rn.162067	NM_001012359	Ang	Angiogenin, ribonuclease, RNase A family, 5
A03	Rn.161953	NM_053546	Angpt1	Angiopoietin 1
A04	Rn.138360	NM_134454	Angpt2	Angiopoietin 2
A05	Rn.11132	NM_031012	Anpep	Alanyl (membrane) aminopeptidase
A06	Rn.103502	XM_343260	Bai1	Brain-specific angiogenesis inhibitor 1
A07	Rn.4772	NM_031530	Ccl2	Chemokine (C-C motif) ligand 2
A08	Rn.164510	NM_001107407	Cdh5	Cadherin 5
A09	Rn.12030	XM_241632	Col18a1	Collagen, type XVIII, alpha 1
A10	Rn.121139	NM_001135759	Col4a3	Collagen, type IV, alpha 3
A11	Rn.17145	NM_022266	Ctgf	Connective tissue growth factor
A12	Rn.10907	NM_030845	Cxcl1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
B01	Rn.10230	NM_053647	Cxcl2	Chemokine (C-X-C motif) ligand 2
B02	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
B03	Rn.10918	NM_012548	Edn1	Endothelin 1
B04	Rn.8427	NM_053599	Efna1	Ephrin A1
B05	Rn.6075	NM_012842	Egf	Epidermal growth factor
B06	Rn.187025	NM_001010968	Eng	Endoglin
B07	Rn.55138	NM_023090	Epas1	Endothelial PAS domain protein 1
B08	Rn.93966	NM_017003	Erbb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B09	Rn.54498	NM_022924	F2	Coagulation factor II (thrombin)
B10	Rn.9980	NM_013057	F3	Coagulation factor III (thromboplastin, tissue factor)
B11	Rn.88013	NM_012846	Fgf1	Fibroblast growth factor 1
B12	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
C01	Rn.81222	NM_131908	Fgf6	Fibroblast growth factor 6
C02	Rn.23671	NM_053429	Fgfr3	Fibroblast growth factor receptor 3
C03	Rn.10796	NM_031761	Figf	C-fos induced growth factor
C04	Rn.10239	NM_019306	Flt1	Fms-related tyrosine kinase 1
C05	Rn.1604	NM_019143	Fn1	Fibronectin 1
C06	Rn.10468	NM_017017	Hgf	Hepatocyte growth factor
C07	Rn.10852	NM_024359	Hif1a	Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
C08	Rn.2113	NM_012797	Id1	Inhibitor of DNA binding 1
C09	Rn.196548	NM_001014786	Ifna1	Interferon-alpha 1
C10	Rn.138105	NM_019127	Ifnb1	Interferon beta 1, fibroblast
C11	Rn.10795	NM_138880	Ifng	Interferon gamma
C12	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
D01	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D02	Rn.9873	NM_012589	Il6	Interleukin 6
D03	Rn.100796	NM_001108118	Itga5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
D04	Rn.23339	NM_001106549	Itgav	Integrin, alpha V
D05	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
D06	Rn.88804	NM_019147	Jag1	Jagged 1
D07	Rn.88869	NM_013062	Kdr	Kinase insert domain receptor

Position	UniGene	GenBank	Symbol	Description
D08	Rn.9900	NM_030854	Lect1	Leukocyte cell derived chemotaxin 1
D09	Rn.44444	NM_013076	Lep	Leptin
D10	Rn.88085	NM_031020	Mapk14	Mitogen activated protein kinase 14
D11	Rn.17447	NM_030859	Mdk	Midkine
D12	Rn.10371	NM_031056	Mmp14	Matrix metallopeptidase 14 (membrane-inserted)
E01	Rn.207126	NM_001107159	Mmp19	Matrix metallopeptidase 19
E02	Rn.6422	NM_031054	Mmp2	Matrix metallopeptidase 2
E03	Rn.32086	NM_133523	Mmp3	Matrix metallopeptidase 3
E04	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
E05	Rn.44265	NM_021838	Nos3	Nitric oxide synthase 3, endothelial cell
E06	Rn.10815	NM_145098	Nrp1	Neuropilin 1
E07	Rn.10816	NM_030869	Nrp2	Neuropilin 2
E08	Rn.10999	NM_012801	Pdgfa	Platelet-derived growth factor alpha polypeptide
E09	Rn.198230	NM_031524	Pdgfb	Platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-sis) oncogene homolog)
E10	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
E11	Rn.6960	NM_053595	Pgf	Placental growth factor
E12	Rn.6064	NM_013085	Plau	Plasminogen activator, urokinase
F01	Rn.20178	NM_053491	Plg	Plasminogen
F02	Rn.44404	NM_017043	Ptgs1	Prostaglandin-endoperoxide synthase 1
F03	Rn.2809	NM_013081	Ptk2	PTK2 protein tyrosine kinase 2
F04	Rn.109455	NM_017301	S1pr1	Sphingosine-1-phosphate receptor 1
F05	Rn.25752	NM_057108	Serpinb5	Serpin peptidase inhibitor, clade B (ovalbumin), member 5
F06	Rn.29367	NM_012620	Serpine1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
F07	Rn.16993	NM_177927	Serpinf1	Serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1
F08	Rn.18522	NM_133386	Sphk1	Sphingosine kinase 1
F09	Rn.9159	NM_001105737	Tek	TEK tyrosine kinase, endothelial
F10	Rn.9952	NM_012671	Tgfa	Transforming growth factor alpha
F11	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
F12	Rn.24539	NM_031131	Tgfb2	Transforming growth factor, beta 2
G01	Rn.7018	NM_013174	Tgfb3	Transforming growth factor, beta 3
G02	Rn.44402	NM_012775	Tgfbr1	Transforming growth factor, beta receptor 1
G03	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G04	Rn.13171	NM_053545	Tie1	Tyrosine kinase with immunoglobulin-like and EGF-like domains 1
G05	Rn.25754	NM_053819	Timp1	TIMP metallopeptidase inhibitor 1
G06	Rn.10161	NM_021989	Timp2	TIMP metallopeptidase inhibitor 2
G07	Rn.119634	NM_012886	Timp3	TIMP metallopeptidase inhibitor 3
G08	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G09	Rn.219088	NM_001012122	Tymp	Thymidine phosphorylase
G10	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G11	Rn.198550	NM_053549	Vegfb	Vascular endothelial growth factor B
G12	Rn.6913	NM_053653	Vegfc	Vascular endothelial growth factor C
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.

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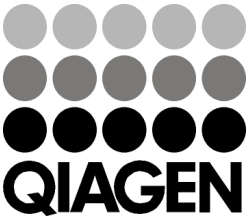

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