

RT² Profiler PCR Array (Rotor-Gene® Format)

Dog Angiogenesis

Cat. no. 330231 PAFD-024ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Dog 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 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 cyclers (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
1	N/A	XM_005623876	AKT1	V-akt murine thymoma viral oncogene homolog 1
2	N/A	XM_005642443	ANG	Angiogenin, ribonuclease, RNase A family, 5
3	Cfa.3523	NM_001005754	ANGPT1	Angiopoietin 1
4	Cfa.13296	NM_001048126	ANGPT2	Angiopoietin 2
5	N/A	XM_005633225	ANGPTL4	Angiopoietin-like 4
6	Cfa.3774	NM_001146034	ANPEP	Alanyl (membrane) aminopeptidase
7	N/A	XM_014118728	ADGRB1	Brain-specific angiogenesis inhibitor 1
8	Cfa.3851	NM_001003297	CCL2	Chemokine (C-C motif) ligand 2
9	N/A	XM_546894	CDH5	Cadherin 5, type 2 (vascular endothelium)
10	N/A	XM_014109869	COL18A1	Collagen, type XVIII, alpha 1
11	Cfa.3705	XM_005635768	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)
12	N/A	XM_005624543	CSF3	Colony stimulating factor 3 (granulocyte)
13	Cfa.16590	NM_001010949	CXCL10	Chemokine (C-X-C motif) ligand 10
14	N/A	XM_849650	CXCL5	Chemokine (C-X-C motif) ligand 5
15	Cfa.125	NM_001002956	EDN1	Endothelin 1
16	N/A	XM_005622754	EFNA1	Ephrin-A1
17	Cfa.17373	NM_001114296	EFNB2	Ephrin-B2
18	Cfa.3524	NM_001003094	EGF	Epidermal growth factor
19	N/A	XM_005625330	ENG	Endoglin
20	N/A	XM_005626080	EPAS1	Endothelial PAS domain protein 1
21	N/A	XM_546948	EPHB4	EPH receptor B4
22	Cfa.3747	NM_001003217	ERBB2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
23	N/A	XM_003639694	F2	Coagulation factor II (thrombin)
24	Cfa.24096	NM_001024640	F3	Coagulation factor III (thromboplastin, tissue factor)
25	N/A	XM_014108102	FGF1	Fibroblast growth factor 1 (acidic)
26	Cfa.3716	XM_003432481	FGF2	Fibroblast growth factor 2 (basic)
27	N/A	XM_005637275	FGF6	Fibroblast growth factor 6
28	N/A	XM_005618527	FGFR3	Fibroblast growth factor receptor 3
29	N/A	XM_548869	FIGF	C-fos induced growth factor (vascular endothelial growth factor D)
30	Cfa.33595	XM_534520	FLT1	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
31	Cfa.47867	XM_014110981	FN1	Fibronectin 1
32	Cfa.3443	NM_001002964	HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)
33	Cfa.126	NM_001287163	HIF1A	Hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
34	N/A	XM_845815	HPSE	Heparanase
35	N/A	XM_847117	ID1	Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
36	Cfa.47521	NM_001135787	IFNB1	Interferon, beta 1, fibroblast
37	Cfa.3900	NM_001003174	IFNG	Interferon gamma

Position	UniGene	GenBank	Symbol	Description
38	Cfa.3888	NM_001313855	IGF1	Insulin-like growth factor 1 (somatomedin C)
39	Cfa.33592	NM_001037971	IL1B	Interleukin 1, beta
40	Cfa.3528	NM_001003301	IL6	Interleukin 6 (interferon, beta 2)
41	Cfa.3510	NM_001003200	CXCL8	Interleukin 8
42	N/A	XM_014110784	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
43	Cfa.3641	NM_001003162	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
44	N/A	XM_005634783	JAG1	Jagged 1
45	Cfa.24332	NM_001048024	KDR	Kinase insert domain receptor (a type III receptor tyrosine kinase)
46	N/A	XM_846901	LECT1	Leukocyte cell derived chemotaxin 1
47	Cfa.3476	NM_001003070	LEP	Leptin
48	N/A	XM_003638769	CTGF	Connective tissue growth factor-like
49	N/A	XM_014121546	PROK2	Prokineticin 2
50	Cfa.3690	XM_851854	MMP14	Matrix metalloproteinase 14 (membrane-inserted)
51	Cfa.3597	XM_014109407	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
52	Cfa.3470	NM_001003219	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
53	Cfa.108	NM_001003158	NOS3	Nitric oxide synthase 3 (endothelial cell)
54	N/A	XM_014118241	NOTCH4	Notch 4
55	N/A	XM_003638876	NRP1	Neuropilin 1
56	N/A	XM_005640571	NRP2	Neuropilin 2
57	Cfa.36580	NM_001190172	PDGFA	Platelet-derived growth factor alpha polypeptide
58	Cfa.3913	NM_001003383	PDGFB	Platelet-derived growth factor beta polypeptide
59	N/A	XM_848326	PECAM1	Platelet/endothelial cell adhesion molecule
60	N/A	XM_849639	PGF	Placental growth factor
61	Cfa.127	NM_001194952	PLAU	Plasminogen activator, urokinase
62	Cfa.3464	NM_001286960	PLG	Plasminogen
63	Cfa.61	NM_001003023	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
64	N/A	XM_005621856	S1PR1	Sphingosine-1-phosphate receptor 1
65	Cfa.109	NM_001197095	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
66	Cfa.4903	NM_001077588	SERPINF1	Serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1
67	N/A	XM_005624054	SPHK1	Sphingosine kinase 1
68	Cfa.3578	XM_005626696	TEK	TEK tyrosine kinase, endothelial
69	Cfa.133	XM_014117458	TGFA	Transforming growth factor, alpha
70	Cfa.3509	NM_001003309	TGFB1	Transforming growth factor, beta 1
71	Cfa.3367	XM_545713	TGFB2	Transforming growth factor, beta 2
72	Cfa.24656	XM_849026	TGFB3	Transforming growth factor, beta 3
73	N/A	XM_014117881	TGFBRI	Transforming growth factor, beta receptor 1
74	N/A	XM_544610	THBS1	Thrombospondin 1
75	Cfa.12249	NM_001197156	THBS2	Thrombospondin 2
76	N/A	XM_539652	TIE1	Tyrosine kinase with immunoglobulin-like and EGF-like domains 1

Position	UniGene	GenBank	Symbol	Description
77	Cfa.3680	NM_001003182	TIMP1	TIMP metalloproteinase inhibitor 1
78	Cfa.3497	NM_001003082	TIMP2	TIMP metalloproteinase inhibitor 2
79	Cfa.39892	NM_001284439	TIMP3	TIMP metalloproteinase inhibitor 3
80	Cfa.54	NM_001003244	TNF	Tumor necrosis factor
81	Cfa.48842	NM_001205168	TNFSF12	Tumor necrosis factor (ligand) superfamily, member 12
82	Cfa.3581	NM_001110502	VEGFA	Vascular endothelial growth factor A
83	N/A	XM_003432332	VEGFB	Similar to vascular endothelial growth factor B
84	N/A	XM_540047	VEGFC	Vascular endothelial growth factor C
85	Cfa.17735	NM_001195845	ACTB	Actin, beta
86	N/A	XM_535458	B2M	Beta-2-microglobulin
87	Cfa.36213	NM_001003142	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
88	Cfa.4551	NM_001003357	HPRT1	Hypoxanthine phosphoribosyltransferase 1
89	N/A	XM_014109387	RPLP1	Ribosomal protein, large, P1
90	N/A	SA_00130	FGDC	Dog Genomic DNA Contamination
91	N/A	SA_00104	RTC	Reverse Transcription Control
92	N/A	SA_00104	RTC	Reverse Transcription Control
93	N/A	SA_00104	RTC	Reverse Transcription Control
94	N/A	SA_00103	PPC	Positive PCR Control
95	N/A	SA_00103	PPC	Positive PCR Control
96	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 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.

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