

RT² Profiler™ PCR Array:

Rat Angiogenic Growth Factors & Angiogenesis Inhibitors

Catalog Number**For Real-Time Instruments:**

PARN-072A	ABI Standard Blocks; Bio-Rad iCycler, MyiQ, and (MJ Research) Chromo 4 and Stratagene Mx3005p, Mx3000p
PARN-072C	ABI 7500 and 7900HT FAST 96-Well Blocks, ABI StepOnePlus
PARN-072D	Bio-Rad (MJ Research) Opticon and Opticon 2, Stratagene Mx4000
PARN-072E	ABI 7900HT 384-Well Block
PARN-072F	Roche LightCycler 480 96-well Block
PARN-072G	Roche LightCycler 480 384-well Block

Description

The Rat Angiogenesis Growth Factors & Angiogenesis Inhibitors RT² Profiler PCR Array profiles the expression of 84 growth factors and inhibitors related to angiogenesis. This array contains the growth factors, cytokines, and chemokines that promote the biogenesis of new blood vessels and the genes that encode inhibitors of this process. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the promotion and inhibition of angiogenesis with this array.

Functional Gene Groupings**Angiogenic Growth Factors and Related Proteins:**

Growth Factors: Csf3, Ereg, Fgf1, Fgf2, Hgf, Lep, Mdk, Pdgfb, Pgf, Ptn, Tgfa, Vegfa.

Cytokines and Chemokines: Csf3, Grn, Tnf.

Other Genes Positively Regulating Angiogenesis: Aggf1, Amot, Angpt1, Angptl3, Angptl4, Arts1, Btg1, Cited1, Egfl7, Erbb2, Foxm1, Fst, Glmn, Hey1, Hey2, Kdr, Myocd, Ntrk2, Ptpnj, Qk, Rasa1, Rhob, Rnase4, Runx1, Shh, Smo, Tdgf1, Wars2, Wt1.

Angiogenesis Inhibitors:

Cytokines, Chemokines and Growth Factors: Cxcl10, Cxcl2, Cxcl4, Cxcl5, Cxcl7, Cxcl9, Ifna1, Ifnb1, Ifng, Il12a, Il12b, Tgfb1.

Other Genes Negatively Regulating Angiogenesis: Adamts1, Amot, Angpt2, Angptl1, Bai1, Cd55, Cd59, Cga, Chga, Col18a1, Col4a3, Crhr2, Fn1, Foxo4 (Mllt7), Hpse, Plg, Prl, Prl7d1 (Plfr), Rnh1, Serpinc1, Serpine1, Serpinf1, Thbs1, Tie1, Timp1, Timp2, Timp3, Timp4, Tnni2, Tnni3.

Storage Conditions

Please check the kit components immediately after you receive this package. SuperArray is only responsible for missing items reported within two (2) business days of receipt.

Storage Conditions: PCR Arrays are shipped at ambient temperature. Keep plates at -20 °C for long-term storage.

NOTE: Be sure that you have the correct PCR Array format for your instrument before starting the experiment.

Product Specification Sheet

References

1. Kuwano, M., et al., *Angiogenesis factors*. Intern Med, 2001. **40**(7): p. 565-72.
2. Nyberg, P., L. Xie, and R. Kalluri, *Endogenous Inhibitors of Angiogenesis*. 2005. p. 3967-3979.
3. Carmeliet, P., *Angiogenesis in life, disease and medicine*. Nature, 2005. **438**(7070): p. 932-936.
4. Kilarski, W.W. and A. Bikfalvi, *Recent Developments in Tumor Angiogenesis*. Current Pharmaceutical Biotechnology, 2007. **8**: p. 3-9.
5. Lamalice, L., F. Le Boeuf, and J. Huot, *Endothelial Cell Migration During Angiogenesis*. 2007. p. 782-794.

Product Specification Sheet

Rat Angiogenic Growth Factors & Angiogenesis Inhibitors RT² Profiler™ PCR Array

Array Layout:

	1	2	3	4	5	6	7	8	9	10	11	12
A	Adams1	Aggf1	Amot	Angpt1	Angpt2	Angptl1	Angptl3	Angptl4	Arts1	Bai1	Btg1	Cd55
B	Cd59	Cga	Chga	Cited1	Col18a1	Col4a3	Crhr2	Csf3	Cxcl10	Cxcl2	Cxcl4	Cxcl5
C	Cxcl7	Cxcl9	Egfl7	Erb2	Ereg	Fgf1	Fgf2	Fn1	Foxm1	Foxo4	Fst	Glmn
D	Grn	Hey1	Hey2	Hgf	Hpse	Ifna1	Ifnb1	Ifng	Il12a	Il12b	Kdr	Lep
E	Mdk	Myocd	Ntrk2	Pdgfb	Pgf	Plg	Prl	Prl7d1	Ptn	Ptprj	Qk	Rasa1
F	Rhob	Rnase4	Rnh1	Runx1	Serpinc1	Serpine1	Serpinf1	Shh	Smo	Tdgf1	Tgfa	Tgfb1
G	Thbs1	Tie1	Timp1	Timp2	Timp3	Timp4	Tnf	Tnni2	Tnni3	Vegfa	Wars2	Wt1
H	Rplp1	Hprt	Rpl13a	Ldha	Actb	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene Table

Position	UniGene	GenBank	Symbol	Description
A01	Rn.7897	NM_024400	Adams1	A disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 1
A02	Rn.206414	XM_226709	Aggf1	Angiogenic factor with G patch and FHA domains 1
A03	Rn.99651	XM_235733	Amot	Angiomotin
A04	Rn.161953	NM_053546	Angpt1	Angiopoietin 1
A05	Rn.138360	XM_344544	Angpt2	Angiopoietin 2
A06	Rn.198951	NM_001109383	Angptl1	Angiopoietin-like 1
A07	Rn.11755	NM_001025065	Angptl3	Angiopoietin-like 3
A08	Rn.119611	NM_199115	Angptl4	Angiopoietin-like 4
A09	Rn.22516	NM_030836	Arts1	Type 1 tumor necrosis factor receptor shedding aminopeptidase regulator
A10	Rn.103502	XM_343260	Bai1_predicted	Brain-specific angiogenesis inhibitor 1 (predicted)
A11	Rn.1000	NM_017258	Btg1	B-cell translocation gene 1, anti-proliferative
A12	Rn.18841	NM_022269	Cd55	CD55 antigen
B01	Rn.1231	NM_012925	Cd59	CD59 antigen
B02	Rn.10589	NM_053918	Cga	Glycoprotein hormones, alpha subunit
B03	Rn.41024	NM_021655	Chga	Chromogranin A
B04	Rn.8163	NM_172055	Cited1	Cbp/p300-interacting transactivator with Glu/Asp-rich carboxy-terminal domain 1
B05	Rn.12030	XM_241632	Col18a1	Procollagen, type XVIII, alpha 1
B06	Rn.121139	XM_343607	Col4a3	Procollagen, type IV, alpha 3
B07	Rn.10023	NM_022714	Crhr2	Corticotropin releasing hormone receptor 2
B08	Rn.53973	NM_017104	Csf3	Colony stimulating factor 3 (granulocyte)
B09	Rn.10584	NM_139089	Cxcl10	Chemokine (C-X-C motif) ligand 10
B10	Rn.10230	NM_053647	Cxcl2	Chemokine (C-X-C motif) ligand 2
B11	Rn.6800	NM_001007729	Cxcl4	Chemokine (C-X-C motif) ligand 4
B12	Rn.44449	NM_022214	Cxcl5	Chemokine (C-X-C motif) ligand 5
C01	Rn.67082	NM_153721	Cxcl7	Chemokine (C-X-C motif) ligand 7
C02	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
C03	Rn.144669	NM_139104	Egfl7	EGF-like domain 7
C04	Rn.93966	NM_017003	Erb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
C05	Rn.42897	NM_021689	Ereg	Eprequin
C06	Rn.88013	NM_012846	Fgf1	Fibroblast growth factor 1
C07	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
C08	Rn.1604	NM_019143	Fn1	Fibronectin 1
C09	Rn.10665	NM_031633	Foxm1	Forkhead box M1
C10	Rn.19646	XM_228556	Foxo4	Forkhead box O4
C11	Rn.162557	NM_012561	Fst	Follistatin
C12	Rn.44333	XM_213992	Glmn	Glomulin, FKBP associated protein
D01	Rn.5820	NM_017113	Grn	Granulin
D02	Rn.98202	XM_342216	Hey1	Hairy/enhancer-of-split related with YRPW motif 1
D03	Rn.58672	XM_344806	Hey2	Hairy/enhancer-of-split related with YRPW motif 2
D04	Rn.10468	NM_017017	Hgf	Hepatocyte growth factor
D05	Rn.6392	NM_022605	Hpse	Heparanase
D06	Rn.196548	NM_001014786	Ifna1	Interferon-alpha 1
D07	Rn.138105	NM_019127	Ifnb1	Interferon beta 1, fibroblast
D08	Rn.10795	NM_138880	Ifng	Interferon gamma
D09	Rn.207199	NM_053390	Il12a	Interleukin 12a
D10	Rn.48686	NM_022611	Il12b	Interleukin 12b
D11	Rn.88869	NM_013062	Kdr	Kinase insert domain protein receptor
D12	Rn.44444	NM_013076	Lep	Leptin
E01	Rn.17447	NM_030859	Mdk	Midkine

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Position	UniGene	GenBank	Symbol	Description
E02	Rn.163103	NM_182667	Myocd	Transcription factor myocardin
E03	Rn.11246	NM_012731	Ntrk2	Neurotrophic tyrosine kinase, receptor, type 2
E04	Rn.198230	XM_343293	Pdgfb	Platelet derived growth factor, B polypeptide
E05	Rn.6960	NM_053595	Pgf	Placental growth factor
E06	Rn.20178	NM_053491	Plg	Plasminogen
E07	Rn.9759	NM_012629	Prl	Prolactin
E08	Rn.15366	NM_053364	Prl7d1	Prolactin family 7, subfamily d, member 1
E09	Rn.1653	NM_017066	Ptn	Pleiotrophin
E10	Rn.10278	NM_017269	Ptprj	Protein tyrosine phosphatase, receptor type, J
E11	Rn.85462	NM_001115021	Qk	Quaking
E12	Rn.12223	NM_013135	Rasa1	RAS p21 protein activator 1
F01	Rn.2042	NM_022542	Rhob	Ras homolog gene family, member B
F02	Rn.1742	NM_020082	Rnase4	Ribonuclease, RNase A family 4
F03	Rn.3756	NM_139105	Rnh1	Ribonuclease/angiogenin inhibitor 1
F04	Rn.11201	NM_017325	Runx1	Runt related transcription factor 1
F05	Rn.204806	NM_001012027	Serpinc1	Serine (or cysteine) peptidase inhibitor, clade C (antithrombin), member 1
F06	Rn.29367	NM_012620	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F07	Rn.16993	NM_177927	Serpinf1	Serine (or cysteine) peptidase inhibitor, clade F, member 1
F08	Rn.10432	NM_017221	Shh	Sonic hedgehog homolog (Drosophila)
F09	Rn.44429	NM_012807	Smo	Smoothened homolog (Drosophila)
F10	N/A	XM_001056317	Tdgf1	Teratocarcinoma-derived growth factor 1
F11	Rn.9952	NM_012671	Tgfa	Transforming growth factor alpha
F12	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G01	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G02	Rn.13171	XM_233462	Tie1	Tyrosine kinase with immunoglobulin-like and EGF-like domains 1
G03	Rn.25754	NM_053819	Timp1	Tissue inhibitor of metallopeptidase 1
G04	Rn.10161	NM_021989	Timp2	Tissue inhibitor of metalloproteinase 2
G05	Rn.119634	NM_012886	Timp3	Tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory)
G06	Rn.155651	XM_001056766	Timp4	Tissue inhibitor of metalloproteinase 4
G07	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G08	Rn.9924	NM_017185	Tnni2	Troponin I type 2 (skeletal, fast)
G09	Rn.64141	NM_017144	Tnni3	Troponin I type 3 (cardiac)
G10	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G11	Rn.204847	XM_001075111	Wars2	Tryptophanyl tRNA synthetase 2 (mitochondrial)
G12	Rn.92531	NM_031534	Wt1	Wilms tumor 1
H01	Rn.973	NM_001007604	Rplp1	Similar to 60S ACIDIC RIBOSOMAL PROTEIN P1
H02	Rn.47	NM_012583	Hprt	Hypoxanthine guanine phosphoribosyl transferase
H03	Rn.92211	NM_173340	Rpl13a	Ribosomal protein L13A
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.94978	NM_031144	Actb	Actin, beta
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