

RT² Profiler™ PCR Array:

Mouse Extracellular Matrix and Adhesion Molecules

Catalog Number

PAMM-013A

PAMM-013C

PAMM-013D

PAMM-013E

PAMM-013F

PAMM-013G

For Real-Time Instruments:

ABI Standard Blocks; Bio-Rad iCycler, MyiQ, and (MJ Research) Chromo 4; and Stratagene Mx3005p, Mx3000p

ABI 7500 and 7900HT FAST 96-Well Blocks, ABI StepOnePlus

Bio-Rad (MJ Research) Opticon and Opticon 2, Stratagene Mx4000

ABI 7900HT 384-Well Block

Roche LightCycler 480 96-well Block

Roche LightCycler 480 384-well Block

Description

The Mouse Extracellular Matrix and Adhesion Molecules RT² Profiler PCR Array profiles the expression of 84 genes important for cell-cell and cell-matrix interactions. This array contains extracellular matrix (ECM) proteins including basement membrane constituents, collagens, and genes playing a role in ECM structure. Proteases involved in remodeling of the ECM are included as well as their inhibitors. This array also represents molecules important to cell adhesion including molecules involved in cell-cell and cell-matrix adhesion, transmembrane molecules, and others. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cell adhesion with this array.

Functional Gene Groupings

Cell Adhesion Molecules:

Transmembrane Molecules: Cd44, Cdh1, Cdh2, Cdh3, Cdh4, Entpd1, Icam1, Itga2, Itga3, Itga4, Itga5, Itgae, Itgal, Itgam, Itgav, Itgb1, Itgb2, Itgb3, Itgb4, Mmp14, Mmp15, Ncam1, Ncam2, Pecam1, Sele, Sell, Selp, Sgce, Syt1, Vcam1.

Cell-Cell Adhesion: Cdh1, Icam1, Vcam1.

Cell-Matrix Adhesion: Ctgf, Itga2, Itga3, Itga4, Itga5, Itgae, Itgal, Itgam, Itgav, Itgax, Itgb1, Itgb2, Itgb3, Itgb4, Spp1.

Other Adhesion Molecules: Ctnna1 (Catna1), Ctnna2 (Catna2), Ctnnb1 (Catnb), Cntn1, Col5a1, Col6a1, Vcan, Emilin1, Fn1, Hapln1, Lama1, Lama2, Lama3, Lamb2, Lamb3, Lamc1, Postn, Tgfb1, Thbs1, Thbs2, Thbs3, Vtn.

Extracellular Matrix Proteins (ECM):

Basement Membrane Constituents: Col4a1, Col4a2, Col4a3, Entpd1, Itgb4, Lama1, Lama2, Lama3, Lamb2, Lamb3, Lamc1, Sparc, Timp1, Timp2, Timp3.

Collagens and ECM Structural Constituents: Col1a1, Col2a1, Col3a1, Col4a1, Col4a2, Col4a3, Col5a1, Col6a1, Hapln1, Lama1.

ECM Proteases: Adamts1, Adamts2, Adamts5, Adamts8, Mmp10, Mmp11, Mmp12, Mmp13, Mmp14, Mmp15, Mmp1a, Mmp2, Mmp3, Mmp7, Mmp8, Mmp9.

ECM Protease Inhibitors: Col4a3, Timp1, Timp2, Timp3.

Other ECM Molecules: Vcan, Ctgf, Ecm1, Emilin1, Fbln1, Fn1, Hc, Postn, Spock1, Spp1, Tgfb1, Thbs1, Tnc.

Storage Conditions

Please check the kit components immediately after you receive this package. We are 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.

References

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2. Gumbiner BM (1996). Cell Adhesion: The Molecular Basis Of Tissue Architecture And Morphogenesis. *Cell* **84**: 345–357.
3. Ben-Ze'ev A, Geiger, B (1998) Differential Molecular Interactions Of β -Catenin And Plakoglobin In Adhesion, Signaling And Cancer. *Curr. Opin. Cell Biol.* **10**: 629–639.
4. Ohene-Abuakwa Y, Pignatelli M (2000) Adhesion Molecules In Cancer Biology. *Adv Exp Med Biol* **465**: 115-126.
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8. Werb, Z. (1997) ECM and Cell Surface Proteolysis: Regulating Cellular Ecology. *Cell* **91**: 439–442.
9. Johansson N, et al. (2000) Matrix Metalloproteinases in Tumor Invasion. *Cell Mol Life Sci* **57**: 5-15.
10. Zieske JD (2001) Extracellular Matrix and Wound Healing *Curr Opin Ophthalmol* **12**: 237-41.
11. Sobel RA. (2001) The Extracellular Matrix in Multiple Sclerosis: An Update. *Braz J Med Biol Res* **34**: 603-9.
12. Schonherr E, Hausser HJ (2000) Extracellular Matrix and Cytokines: a Functional Unit. *Dev Immunol* **7**: 89-101.
13. Raines EW. (2000) The Extracellular Matrix Can Regulate Vascular Cell Migration, Proliferation, and Survival: Relationships to Vascular Disease. *Int J Exp Pathol.* **81**: 173-82.
14. Boluyt MO, Bing OH (2000) Matrix Gene Expression and Decompensated Heart Failure: the Aged SHR Model. *Cardiovasc Res.* **46**: 239-49.
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Product Specification Sheet

Array Layout: Mouse Extracellular Matrix and Adhesion Molecules PCR Array

	1	2	3	4	5	6	7	8	9	10	11	12
A	Adamts1	Adamts2	Adamts5	Adamts8	Ctnna1	Ctnna2	Ctnnb1	Cd44	Cdh1	Cdh2	Cdh3	Cdh4
B	Cntn1	Col1a1	Col2a1	Col3a1	Col4a1	Col4a2	Col4a3	Col5a1	Col6a1	Vcan	Ctgf	Ecm1
C	Emilin1	Entpd1	Fbln1	Fn1	Hapln1	Hc	Icam1	Itga2	Itga3	Itga4	Itga5	Itgae
D	Itgal	Itgam	Itgav	Itgax	Itgb1	Itgb2	Itgb3	Itgb4	Lama1	Lama2	Lama3	Lamb2
E	Lamb3	Lamc1	Mmp10	Mmp11	Mmp12	Mmp13	Mmp14	Mmp15	Mmp1a	Mmp2	Mmp3	Mmp7
F	Mmp8	Mmp9	Ncam1	Ncam2	Pecam1	Postn	Sele	Sell	Selp	Sgce	Sparc	Spock1
G	Spp1	Syt1	Tgfb1	Thbs1	Thbs2	Thbs3	Timp1	Timp2	Timp3	Tnc	Vcam1	Vtn
H	Gusb	Hprt1	Hsp90ab1	Gapdh	Actb	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene Table

Position	UniGene	GenBank	Symbol	Description
A01	Mm.1421	NM_009621	Adamts1	A disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 1
A02	Mm.339048	NM_175643	Adamts2	A disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 2
A03	Mm.112933	NM_011782	Adamts5	A disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 5 (aggrecanase-2)
A04	Mm.100582	NM_013906	Adamts8	A disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 8
A05	Mm.18962	NM_009818	Ctnna1	Catenin (cadherin associated protein), alpha 1
A06	Mm.34637	NM_009819	Ctnna2	Catenin (cadherin associated protein), alpha 2
A07	Mm.291928	NM_007614	Ctnnb1	Catenin (cadherin associated protein), beta 1
A08	Mm.423621	NM_009851	Cd44	CD44 antigen
A09	Mm.35605	NM_009864	Cdh1	Cadherin 1
A10	Mm.257437	NM_007664	Cdh2	Cadherin 2
A11	Mm.4658	NM_001037809	Cdh3	Cadherin 3
A12	Mm.382094	NM_009867	Cdh4	Cadherin 4
B01	Mm.4911	NM_007727	Cntn1	Contactin 1
B02	Mm.277735	NM_007742	Col1a1	Procollagen, type I, alpha 1
B03	Mm.2423	NM_031163	Col2a1	Procollagen, type II, alpha 1
B04	Mm.249555	NM_009930	Col3a1	Procollagen, type III, alpha 1
B05	Mm.738	NM_009931	Col4a1	Procollagen, type IV, alpha 1
B06	Mm.181021	NM_009932	Col4a2	Procollagen, type IV, alpha 2
B07	Mm.389135	NM_007734	Col4a3	Procollagen, type IV, alpha 3
B08	Mm.7281	NM_015734	Col5a1	Procollagen, type V, alpha 1
B09	Mm.2509	NM_009933	Col6a1	Procollagen, type VI, alpha 1
B10	Mm.158700	XM_488510	Vcan	Versican
B11	Mm.393058	NM_010217	Ctgf	Connective tissue growth factor
B12	Mm.3433	NM_007899	Ecm1	Extracellular matrix protein 1
C01	Mm.286375	NM_133918	Emilin1	Elastin microfibril interfacier 1
C02	Mm.2824	NM_009848	Entpd1	Ectonucleoside triphosphate diphosphohydrolase 1
C03	Mm.297992	NM_010180	Fbln1	Fibulin 1
C04	Mm.193099	NM_010233	Fn1	Fibronectin 1
C05	Mm.266790	NM_013500	Hapln1	Hyaluronan and proteoglycan link protein 1
C06	Mm.2168	NM_010406	Hc	Hemolytic complement
C07	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule
C08	Mm.5007	NM_008396	Itga2	Integrin alpha 2
C09	Mm.57035	NM_013565	Itga3	Integrin alpha 3
C10	Mm.33596	NM_010576	Itga4	Integrin alpha 4
C11	Mm.16234	NM_010577	Itga5	Integrin alpha 5 (fibronectin receptor alpha)
C12	Mm.96	NM_008399	itgae	Integrin, alpha E, epithelial-associated
D01	Mm.1618	NM_008400	Itgal	Integrin alpha L
D02	Mm.262106	NM_008401	Itgam	Integrin alpha M
D03	Mm.227	NM_008402	Itgav	Integrin alpha V

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Position	UniGene	GenBank	Symbol	Description
D04	Mm.22378	NM_021334	Itgax	Integrin alpha X
D05	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
D06	Mm.1137	NM_008404	Itgb2	Integrin beta 2
D07	Mm.87150	NM_016780	Itgb3	Integrin beta 3
D08	Mm.213873	NM_001005608	Itgb4	Integrin beta 4
D09	Mm.303386	NM_008480	Lama1	Laminin, alpha 1
D10	Mm.256087	NM_008481	Lama2	Laminin, alpha 2
D11	Mm.42012	XM_140451	Lama3	Laminin, alpha 3
D12	Mm.425599	NM_008483	Lamb2	Laminin, beta 2
E01	Mm.435441	NM_008484	Lamb3	Laminin, beta 3
E02	Mm.1249	NM_010683	Lamc1	Laminin, gamma 1
E03	Mm.14126	NM_019471	Mmp10	Matrix metalloproteinase 10
E04	Mm.4561	NM_008606	Mmp11	Matrix metalloproteinase 11
E05	Mm.2055	NM_008605	Mmp12	Matrix metalloproteinase 12
E06	Mm.5022	NM_008607	Mmp13	Matrix metalloproteinase 13
E07	Mm.280175	NM_008608	Mmp14	Matrix metalloproteinase 14 (membrane-inserted)
E08	Mm.217116	NM_008609	Mmp15	Matrix metalloproteinase 15
E09	Mm.156952	NM_032006	Mmp1a	Matrix metalloproteinase 1a (interstitial collagenase)
E10	Mm.29564	NM_008610	Mmp2	Matrix metalloproteinase 2
E11	Mm.4993	NM_010809	Mmp3	Matrix metalloproteinase 3
E12	Mm.4825	NM_010810	Mmp7	Matrix metalloproteinase 7
F01	Mm.16415	NM_008611	Mmp8	Matrix metalloproteinase 8
F02	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
F03	Mm.4974	NM_010875	Ncam1	Neural cell adhesion molecule 1
F04	Mm.364726	NM_010954	Ncam2	Neural cell adhesion molecule 2
F05	Mm.343951	NM_008816	Pecam1	Platelet/endothelial cell adhesion molecule 1
F06	Mm.236067	NM_015784	Postn	Periostin, osteoblast specific factor
F07	Mm.5245	NM_011345	Sele	Selectin, endothelial cell
F08	Mm.1461	NM_011346	Sell	Selectin, lymphocyte
F09	Mm.3337	NM_011347	Selp	Selectin, platelet
F10	Mm.8739	NM_011360	Sgce	Sarcoglycan, epsilon
F11	Mm.291442	NM_009242	Sparc	Secreted acidic cysteine rich glycoprotein
F12	Mm.379020	NM_009262	Spock1	Sparc/osteonectin, cwcv and kazal-like domains proteoglycan 1
G01	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
G02	Mm.289702	NM_009306	Syt1	Synaptotagmin I
G03	Mm.14455	NM_009369	Tgfb1	Transforming growth factor, beta induced
G04	Mm.4159	NM_011580	Thbs1	Thrombospondin 1
G05	Mm.26688	NM_011581	Thbs2	Thrombospondin 2
G06	Mm.2114	NM_013691	Thbs3	Thrombospondin 3
G07	Mm.8245	NM_011593	Timp1	Tissue inhibitor of metalloproteinase 1
G08	Mm.206505	NM_011594	Timp2	Tissue inhibitor of metalloproteinase 2
G09	Mm.4871	NM_011595	Timp3	Tissue inhibitor of metalloproteinase 3
G10	Mm.980	NM_011607	Tnc	Tenascin C
G11	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G12	Mm.3667	NM_011707	Vtn	Vitronectin
H01	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H02	Mm.299381	NM_013556	Hprt1	Hypoxanthine guanine phosphoribosyl transferase 1
H03	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90kDa alpha (cytosolic), class B member 1
H04	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H05	Mm.328431	NM_007393	Actb	Actin, beta, cytoplasmic
H06	N/A	N/A	MGDC	Mouse Genomic DNA Contamination
H07	N/A	N/A	RTC	Reverse Transcription Control
H08	N/A	N/A	RTC	Reverse Transcription Control
H09	N/A	N/A	RTC	Reverse Transcription Control
H10	N/A	N/A	PPC	Positive PCR Control
H11	N/A	N/A	PPC	Positive PCR Control
H12	N/A	N/A	PPC	Positive PCR Control