RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Extracellular Matrix & Adhesion Molecules

Cat. no. 330231 PARN-013ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat Extracellular Matrix & Adhesion Molecules RT² Profiler PCR Array profiles the expression of 84 genes important for cell-cell and cell-matrix interactions. Cells attach to proteoglycans and glycoproteins (such as fibronectin, laminin, and collagen) in the extracellular matrix (ECM) substratum via adhesion molecules on their cell surface to define tissue shape, structure, and function. Making and breaking cellular contacts with other cells and the ECM play critical roles in normal processes such as cell growth, division, differentiation, and migration. Disease states (metastasis, rheumatoid arthritis, and cardiovascular and central nervous system disorders) and pathophysiological processes (wound healing and inflammation) also involve ECM remodeling and changes in the classes of cell adhesion molecule expressed on cell surfaces. This array contains ECM proteins including basement membrane constituents, collagens, and other genes defining ECM structure. Matrix and other metalloproteinases that remodel the ECM as well as their inhibitors are also included. This array also represents integrins, selectins, cell-adhesion molecule family members (ICAM, ECAM, NCAM, PECAM, and VCAM), and other genes important to cell adhesion and cytoskeleton bridging such as the catenins. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cell adhesion and the ECM with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

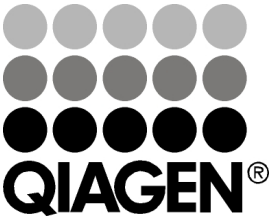
Shipping and storage

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 cycler (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
A01	Rn.7897	NM_024400	Adamts1	ADAM metallopeptidase with thrombospondin type 1 motif, 1
A02	Rn.86986	NM_001137622	Adamts2	ADAM metallopeptidase with thrombospondin type 1 motif, 2
A03	Rn.107051	NM_198761	Adamts5	ADAM metallopeptidase with thrombospondin type 1 motif, 5
A04	Rn.100730	NM_001106811	Adamts8	ADAM metallopeptidase with thrombospondin type 1 motif, 8
A05	Rn.103790	NM_001007145	Catna1	Catenin (cadherin associated protein), alpha 1
A06	Rn.1120	NM_012924	Cd44	Cd44 molecule
A07	Rn.1303	NM_031334	Cdh1	Cadherin 1
A08	Rn.23200	NM_031333	Cdh2	Cadherin 2
A09	Rn.105829	NM_053938	Cdh3	Cadherin 3
A10	Rn.214089	XM_001061943	Cdh4	Cadherin 4
A11	Rn.21397	NM_057118	Cntn1	Contactin 1
A12	Rn.2953	NM_053304	Col1a1	Collagen, type I, alpha 1
B01	Rn.10124	NM_012929	Col2a1	Collagen, type II, alpha 1
B02	Rn.3247	NM_032085	Col3a1	Collagen, type III, alpha 1
B03	Rn.53801	NM_001135009	Col4a1	Collagen, type IV, alpha 1
B04	Rn.2237	XM_225043	Col4a2	Collagen, type IV, alpha 2
B05	Rn.121139	NM_001135759	Col4a3	Collagen, type IV, alpha 3
B06	Rn.117	NM_134452	Col5a1	Collagen, type V, alpha 1
B07	Rn.107165	XM_215375	Col6a1	Collagen, type VI, alpha 1
B08	Rn.53843	NM_001107100	Col8a1	Collagen, type VIII, alpha 1
B09	Rn.17145	NM_022266	Ctgf	Connective tissue growth factor
B10	Rn.34514	NM_001106598	Ctnna2	Catenin (cadherin associated protein), alpha 2
B11	Rn.112601	NM_053357	Ctnnb1	Catenin (cadherin associated protein), beta 1
B12	Rn.97792	NM_053882	Ecm1	Extracellular matrix protein 1
C01	Rn.99346	NM_001106710	Emilin1	Elastin microfibril interfacer 1
C02	Rn.17491	NM_022587	Entpd1	Ectonucleoside triphosphate diphosphohydrolase 1
C03	Rn.9375	NM_001127547	Fbln1	Fibulin 1
C04	Rn.1604	NM_019143	Fn1	Fibronectin 1
C05	Rn.50531	NM_019189	Hapln1	Hyaluronan and proteoglycan link protein 1
C06	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
C07	Rn.83597	XM_345156	Itga2	Integrin, alpha 2
C08	Rn.154664	NM_001108292	Itga3	Integrin, alpha 3
C09	Rn.12704	NM_001107737	Itga4	Integrin, alpha 4
C10	Rn.100796	NM_001108118	Itga5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
C11	Rn.34728	NM_031691	Itgad	Integrin, alpha D
C12	Rn.29975	NM_031768	Itgae	Integrin, alpha E
D01	Rn.14655	NM_001033998	Itgal	Integrin, alpha L
D02	Rn.54465	NM_012711	Itgam	Integrin, alpha M
D03	Rn.23339	NM_001106549	Itgav	Integrin, alpha V
D04	Rn.25733	NM_017022	Itgb1	Integrin, beta 1
D05	Rn.42962	NM_001037780	Itgb2	Integrin, beta 2
D06	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
D07	Rn.198908	NM_013180	Itgb4	Integrin, beta 4
D08	Rn.2807	NM_001108237	Lama1	Laminin, alpha 1
D09	Rn.21475	XM_219866	Lama2	Laminin, alpha 2
D10	Rn.10597	XM_226159	Lama3	Laminin, alpha 3
D11	Rn.774	NM_012974	Lamb2	Laminin, beta 2
D12	Rn.49634	NM_001100841	Lamb3	Laminin, beta 3
E01	Rn.7145	NM_053966	Lamc1	Laminin, gamma 1
E02	Rn.9946	NM_133514	Mmp10	Matrix metallopeptidase 10
E03	Rn.11123	NM_012980	Mmp11	Matrix metallopeptidase 11
E04	Rn.33193	NM_053963	Mmp12	Matrix metallopeptidase 12
E05	Rn.10997	NM_133530	Mmp13	Matrix metallopeptidase 13
E06	Rn.10371	NM_031056	Mmp14	Matrix metallopeptidase 14 (membrane-inserted)
E07	Rn.165433	NM_001106168	Mmp15	Matrix metallopeptidase 15
E08	Rn.208361	NM_080776	Mmp16	Matrix metallopeptidase 16
E09	Rn.79007	NM_001134530	Mmp1a	Matrix metallopeptidase 1a (interstitial collagenase)

Position	UniGene	GenBank	Symbol	Description
E10	Rn.6422	NM_031054	Mmp2	Matrix metallopeptidase 2
E11	Rn.32086	NM_133523	Mmp3	Matrix metallopeptidase 3
E12	Rn.10282	NM_012864	Mmp7	Matrix metallopeptidase 7
F01	Rn.44474	NM_022221	Mmp8	Matrix metallopeptidase 8
F02	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
F03	Rn.11283	NM_031521	Ncam1	Neural cell adhesion molecule 1
F04	Rn.138756	NM_203409	Ncam2	Neural cell adhesion molecule 2
F05	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
F06	Rn.30516	NM_001108550	Postn	Periostin, osteoblast specific factor
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.185815	NM_001002023	Sgce	Sarcoglycan, epsilon
F11	Rn.98989	NM_012656	Sparc	Secreted protein, acidic, cysteine-rich (osteonectin)
F12	Rn.44057	XM_225160	Spock1	Sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 1
G01	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
G02	Rn.216272	NM_001033680	Syt1	Synaptotagmin I
G03	Rn.1046	NM_053802	Tgfbi	Transforming growth factor, beta induced
G04	Rn.185771	NM_001013062	Thbs1	Thrombospondin 1
G05	Rn.165619	NM_001169138	Thbs2	Thrombospondin 2
G06	Rn.25754	NM_053819	Timp1	TIMP metallopeptidase inhibitor 1
G07	Rn.10161	NM_021989	Timp2	TIMP metallopeptidase inhibitor 2
G08	Rn.119634	NM_012886	Timp3	TIMP metallopeptidase inhibitor 3
G09	Rn.12723	NM_053861	Tnc	Tenascin C
G10	Rn.11267	NM_012889	Vcam1	Vascular cell adhesion molecule 1
G11	Rn.35666	XM_215451	Vcan	Versican
G12	Rn.87493	NM_019156	Vtn	Vitronectin
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 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.

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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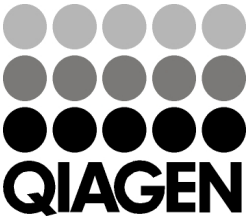

Sample & Assay Technologies