

RT² Profiler PCR Array (Rotor-Gene® Format)

Pig Extracellular Matrix & Adhesion Molecules

Cat. no. 330231 PASS-013ZR

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 Pig 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 includes genes encoding 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, research studies 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.



Sample & Assay Technologies

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	Ssc.12365	NM_001144843	ADAMTS1	ADAM metalloproteinase with thrombospondin type 1 motif, 1
A02	Ssc.81035	XM_003132747	ADAMTS5	ADAM metalloproteinase with thrombospondin type 1 motif, 5
A03	Ssc.70001	NM_213833	CCN2	Connective tissue growth factor
A04	Ssc.7538	NM_001163060	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
A05	Ssc.1049	XM_001927036	COL12A1	Collagen, type XII, alpha 1
A06	Ssc.6778	XM_001924325	COL14A1	Collagen, type XIV, alpha 1
A07	Ssc.55931	XM_003483014	COL1A1	Collagen, type I, alpha 1
A08	Ssc.16016	XM_001925959	COL2A1	Collagen, type II, alpha 1
A09	Ssc.24309	NM_001243297	COL3A1	Collagen, type III, alpha 1
A10	Ssc.3467	XM_003131092	COL4A2	Collagen, type IV, alpha 2
A11	Ssc.16254	XM_003362059	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)
A12	Ssc.82561	NM_001014971	COL5A1	Collagen, type V, alpha 1
B01	Ssc.51244	XM_003359016	COL6A2	Collagen, type VI, alpha 2
B02	Ssc.39484	XM_003132189	COL7A1	Collagen, type VII, alpha 1
B03	Ssc.16132	XM_001926443	COL8A1	Collagen, type VIII, alpha 1
B04	Ssc.15786	XM_001929372	COL11A1	Collagen type XI alpha 1
B05	Ssc.83551	XM_003123988	CTNNA1	Catenin (cadherin-associated protein), alpha 1, 102kDa
B06	Ssc.38034	XM_003124974	CTNNA2	Catenin (cadherin-associated protein), alpha 2
B07	Ssc.25839	NM_214367	CTNNA3	Catenin (cadherin-associated protein), beta 1, 88kDa
B08	Ssc.9293	XM_003122712	CTNND1	Catenin (cadherin-associated protein), delta 1
B09	Ssc.51171	XM_003133835	CTNND2	Catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein)
B10	N/A	XM_003355202	ECM1	Extracellular matrix protein 1
B11	Ssc.38677	XM_003125303	EMILIN1	Elastin microfibril interfacer 1
B12	Ssc.52334	NM_214153	ENTPD1	Ectonucleoside triphosphate diphosphohydrolase 1
C01	Ssc.54200	XM_003125955	FBLN1	Fibulin 1
C02	Ssc.16743	XM_003133641	FN1	Fibronectin 1
C03	Ssc.16229	NM_001004028	HAPLN1	Hyaluronan and proteoglycan link protein 1
C04	Ssc.73598	NM_001136212	HAS1	Hyaluronan synthase 1
C05	Ssc.11187	NM_213816	ICAM-1	Intercellular adhesion molecule-1
C06	Ssc.16218	XM_003133944	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
C07	Ssc.78753	XM_003131594	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)
C08	Ssc.5209	XM_003133517	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)
C09	Ssc.16663	XM_001925252	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
C10	Ssc.28572	XM_001925637	ITGA6	Integrin, alpha 6
C11	Ssc.2786	XM_003126248	ITGA7	Integrin, alpha 7
C12	Ssc.1377	XM_003130746	ITGA8	Integrin, alpha 8
D01	Ssc.90648	XM_003131867	ITGAE	Integrin, alpha E (antigen CD103, human mucosal lymphocyte antigen 1; alpha polypeptide)
D02	Ssc.32988	NM_001044608	ITGAL	Integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)
D03	Ssc.16206	XM_003124492	ITGAM	Integrin, alpha M (complement component 3 receptor 3 subunit)
D04	Ssc.15932	NM_001083932	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
D05	Ssc.4621	NM_213968	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
D06	Ssc.14561	NM_213908	ITGB2	Integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)
D07	Ssc.44	NM_214002	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
D08	Ssc.26290	XM_003358781	ITGB5	Integrin, beta 5
D09	Ssc.71598	XM_001925070	KAL1	Kallmann syndrome 1 sequence
D10	N/A	XM_003361383	LAMA1	Laminin, alpha 1
D11	Ssc.72937	XM_001926517	LAMA2	Laminin, alpha 2
D12	Ssc.2444	XM_003127861	LAMA3	Laminin, alpha 3
E01	Ssc.24580	XM_003130269	LAMB1	Laminin, beta 1
E02	N/A	XM_003358434	LAMC1	Laminin, gamma 1 (formerly LAMB2)
E03	Ssc.992	XM_003121075	LOC100153940	Thrombospondin-2-like
			LOC100513	

Position	UniGene	GenBank	Symbol	Description
E04	Ssc.11499	XM_003130428	489	Laminin subunit beta-3-like
E05	Ssc.3051	XM_003129842	LOC100515564	Neural cell adhesion molecule 1-like
E06	Ssc.13389	XM_003126611	LOC100521555	Contactin-1-like
E07	Ssc.8924	XM_003131195	LOC100521988	Integrin beta-4-like
E08	Ssc.36853	XM_003122866	LOC100525150	CD44 antigen-like
E09	Ssc.16013	NM_001166229	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)
E10	Ssc.29123	XM_001929445	MMP11	Matrix metalloproteinase 11 (stromelysin 3)
E11	Ssc.48456	NM_001099938	MMP12	Matrix metalloproteinase 12 (macrophage elastase)
E12	Ssc.16053	XM_003129808	MMP-13	Matrix metalloproteinase 13 precursor
F01	Ssc.734	NM_214239	MMP14	Matrix metalloproteinase 14 (membrane-inserted)
F02	Ssc.42086	XM_003126962	MMP15	Matrix metalloproteinase 15 (membrane-inserted)
F03	Ssc.91622	XM_001926617	MMP16	Matrix metalloproteinase 16 (membrane-inserted)
F04	Ssc.5713	NM_214192	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
F05	Ssc.15927	NM_001166308	MMP3	Matrix metalloproteinase 3 (stromelysin 1, progelatinase)
F06	Ssc.548	NM_214207	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
F07	Ssc.95452	XM_003129816	MMP8	Matrix metalloproteinase 8 (neutrophil collagenase)
F08	Ssc.4086	NM_001038004	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F09	Ssc.14558	NM_213907	PECAM1	Platelet/endothelial cell adhesion molecule
F10	Ssc.16297	NM_214268	SELE	Selectin E
F11	Ssc.22075	NM_001112678	SELL	Selectin L
F12	Ssc.290	NM_214078	SELP	Selectin P (granule membrane protein 140kDa, antigen CD62)
G01	Ssc.82852	NM_001144124	SGCE	Sarcoglycan, epsilon
G02	Ssc.17253	NM_001031794	SPARC	Secreted protein, acidic, cysteine-rich (osteonectin)
G03	Ssc.23321	NM_214023	SPP1	Secreted phosphoprotein 1
G04	Ssc.81783	XM_003480913	TGFBI	Transforming growth factor, beta-induced, 68kDa
G05	Ssc.924	XM_001927442	THBS1	Thrombospondin 1
G06	Ssc.11559	XM_001926844	THBS3	Thrombospondin 3
G07	Ssc.11784	NM_213857	TIMP1	TIMP metalloproteinase inhibitor 1
G08	Ssc.57257	NM_001145985	TIMP2	TIMP metalloproteinase inhibitor 2
G09	Ssc.16209	NM_214230	TNC	Tenascin C
G10	Ssc.14522	NM_213891	VCAM1	Vascular cell adhesion molecule 1
G11	Ssc.5663	NM_001206429	VCAN	Versican
G12	Ssc.32202	NM_214104	VTN	Vitronectin
H01	Ssc.10316	XM_003357928	ACTB	Actin, beta
H02	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin
H03	Ssc.16135	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Ssc.27927	XM_003127305	RPL13A	Ribosomal protein L13a
H06	N/A	SA_00133	SGDC	Pig 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.
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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