

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Rabbit Extracellular Matrix & Adhesion Molecules

Cat. no. 330231 PANZ-013Z

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

## Description

The Rabbit Extracellular Matrix & Adhesion Molecules RT<sup>2</sup> 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 *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at  $-20^{\circ}\text{C}$ .

Note: Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

Note: Open the package and store the products appropriately immediately on receipt.

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ADAMTS1	ADAMTS13	ADAMTS2	ADAMTS8	ANOS1	CD44	CDH1	CLEC3B	CNTN1	COL11A1	COL12A1	COL14A1
B	COL15A1	COL16A1	COL1A1	COL4A2	COL5A1	COL6A1	COL6A2	COL7A1	COL8A1	CTGF	CTNNA1	CTNNA1
C	CTNND1	CTNND2	ECM1	FN1	HAS1	ICAM1	ITGA1	ITGA2	ITGA3	ITGA4	ITGA5	ITGA6
D	ITGA7	ITGA8	ITGAL	ITGAM	ITGAV	ITGB1	ITGB2	ITGB3	ITGB4	ITGB5	LAMA1	LAMA2
E	LAMA3	LAMB1	LAMB3	LOC1033464 47	MMP1	MMP10	MMP11	MMP12	MMP13	MMP14	MMP15	MMP16
F	MMP2	MMP3	MMP7	MMP8	MMP9	NCAM1	PECAM1	SELE	SELL	SGCE	SPARC	SPG7
G	SPP1	TGFBI	THBS1	THBS2	THBS3	TIMP1	TIMP2	TIMP3	TNC	VCAM1	VCAN	VTN
H	ACTA2	ACTB	GAPDH	LDHA	LOC1003469 36	NGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	N/A	XM_008267152	ADAMTS1	ADAM metalloproteinase with thrombospondin type 1 motif, 1
A02	N/A	XM_008253631	ADAMTS13	ADAM metalloproteinase with thrombospondin type 1 motif, 13
A03	N/A	XM_008274971	ADAMTS2	ADAM metalloproteinase with thrombospondin type 1 motif, 3
A04	N/A	XM_008259140	ADAMTS8	ADAM metalloproteinase with thrombospondin type 1 motif, 8
A05	N/A	XM_008251733	ANOS1	Anosmin 1
A06	Ocu.7518	XM_002709048	CD44	CD44 molecule (Indian blood group)
A07	N/A	XM_002711639	CDH1	E-cadherin-like
A08	N/A	XM_008260499	CLEC3B	C-type lectin domain family 3, member B
A09	N/A	XM_008259399	CNTN1	Contactin 1
A10	N/A	XM_008264806	COL11A1	Collagen, type XI, alpha 1
A11	Ocu.3323	XM_008263112	COL12A1	Collagen, type XII, alpha 1
A12	N/A	XM_002710753	COL14A1	Collagen, type XIV, alpha 1
B01	N/A	XM_008262238	COL15A1	Collagen, type XV, alpha 1
B02	N/A	XM_008273785	COL16A1	Collagen, type XVI, alpha 1
B03	N/A	XM_008271783	COL1A1	Collagen, type I, alpha 1
B04	N/A	XM_008260180	COL4A2	Collagen, type IV, alpha 2
B05	Ocu.792	XM_008253537	COL5A1	Collagen, type V, alpha 1
B06	N/A	XM_008251846	COL6A1	Collagen, type VI, alpha 1
B07	N/A	XM_008267252	COL6A2	Collagen, type VI, alpha 2
B08	N/A	XM_008260611	COL7A1	Collagen, type VII, alpha 1
B09	Ocu.6202	NM_001082666	COL8A1	Collagen, type VIII, alpha 1
B10	Ocu.3361	XM_008263527	CTGF	Connective tissue growth factor
B11	Ocu.1707	NM_001117142	CTNNA1	Catenin (cadherin-associated protein), alpha 1, 102kDa
B12	Ocu.3227	XM_002713075	CTNNA1	Catenin (cadherin-associated protein), beta 1, 88kDa
C01	N/A	XM_008271512	CTNND1	Catenin (cadherin-associated protein), delta 1
C02	N/A	XM_008262072	CTNND2	Catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein)-like
C03	N/A	XM_008264481	ECM1	Extracellular matrix protein 1
C04	Ocu.1875	XM_008259120	FN1	Fibronectin 1
C05	N/A	XM_008249800	HAS1	Hyaluronan synthase 1
C06	N/A	XM_008250743	ICAM1	Intercellular adhesion molecule-like
C07	N/A	XM_008262192	ITGA1	Integrin, alpha 1
C08	Ocu.7187	XM_008262193	ITGA2	Alpha 2 integrin
C09	N/A	XM_008271311	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)
C10	N/A	XM_002712227	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)
C11	Ocu.3321	XM_002711037	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
C12	Ocu.3337	XM_008258747	ITGA6	Integrin, alpha 6
D01	N/A	XM_002711055	ITGA7	Integrin, alpha 7
D02	N/A	XM_002717427	ITGA8	Integrin, alpha 8
D03	N/A	XM_008248739	ITGAL	Integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)

Position	UniGene	GenBank	Symbol	Description
D04	N/A	XM_002721749	ITGAM	Integrin, alpha M (complement component 3 receptor 3 subunit)
D05	Ocu.3178	XM_002712329	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
D06	Ocu.3065	XM_002721189	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
D07	N/A	XM_002724155	ITGB2	Integrin beta-2-like
D08	Ocu.2373	NM_001082066	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
D09	Ocu.7185	XM_008250947	ITGB4	Beta 4 integrin
D10	N/A	XM_002716419	ITGB5	Integrin, beta 5
D11	N/A	XM_008261059	LAMA1	Laminin, alpha 1
D12	N/A	XM_008263482	LAMA2	Laminin, alpha 2
E01	N/A	XM_008261146	LAMA3	Laminin, alpha 3
E02	N/A	XM_008258355	LAMB1	Laminin, beta 1
E03	N/A	XM_008268459	LAMB3	Laminin, beta 3
E04	N/A	XM_008252558	LOC103346447	Laminin subunit gamma-1-like
E05	Ocu.2695	NM_001171139	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)
E06	Ocu.7170	XM_002708561	MMP10	Matrix metalloproteinase 10
E07	Ocu.7169	XM_002724012	MMP11	Matrix metalloproteinase 11
E08	Ocu.2122	NM_001082771	MMP12	Matrix metalloproteinase 12 (macrophage elastase)
E09	Ocu.2263	NM_001082037	MMP13	Matrix metalloproteinase 13 (collagenase 3)
E10	Ocu.6250	NM_001082793	MMP14	Matrix metalloproteinase 14 (membrane-inserted)
E11	N/A	XM_002711548	MMP15	Matrix metalloproteinase 15 (membrane-inserted)
E12	Ocu.7167	XM_002710677	MMP16	Membrane-type 3 matrix metalloproteinase
F01	Ocu.6274	NM_001082209	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
F02	Ocu.1964	NM_001082280	MMP3	Matrix metalloproteinase 3 (stromelysin 1, progelatinase)
F03	N/A	XM_002708573	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
F04	N/A	XM_002708421	MMP8	Matrix metalloproteinase 8 (neutrophil collagenase)
F05	Ocu.1773	NM_001082203	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F06	N/A	XM_008261250	NCAM1	Neural cell adhesion molecule 1
F07	N/A	XM_008271715	PECAM1	Platelet/endothelial cell adhesion molecule 1
F08	Ocu.1871	NM_001082312	SELE	Selectin E
F09	Ocu.2027	NM_001082352	SELL	Selectin L
F10	N/A	XM_008261715	SGCE	Sarcoglycan, epsilon
F11	Ocu.544	XM_008255281	SPARC	Secreted protein, acidic, cysteine-rich (osteonectin)
F12	N/A	XM_008252191	SPG7	Spastic paraplegia 7 (pure and complicated autosomal recessive)
G01	Ocu.2423	NM_001082194	SPP1	Secreted phosphoprotein 1
G02	Ocu.4839	XM_002710222	TGFB1	Transforming growth factor, beta-induced, 68kDa
G03	N/A	XM_002717799	THBS1	Thrombospondin 1
G04	N/A	XM_008252461	THBS2	Thrombospondin-1-like
G05	N/A	XM_008264353	THBS3	Thrombospondin 3
G06	Ocu.178	NM_001082232	TIMP1	TIMP metalloproteinase inhibitor 1
G07	Ocu.2314	XM_008252508	TIMP2	TIMP metalloproteinase inhibitor 2
G08	Ocu.2315	NM_001195682	TIMP3	TIMP metalloproteinase inhibitor 3
G09	Ocu.7534	XM_008273387	TNC	Tenascin C
G10	Ocu.3113	NM_001082152	VCAM1	Adhesion molecule VCAM-1
G11	Ocu.2225	XM_008261907	VCAN	Versican
G12	Ocu.1882	NM_001082292	VTN	Vitronectin
H01	Ocu.2090	NM_001101682	ACTA2	Actin, alpha 2, smooth muscle, aorta
H02	Ocu.734	NM_001101683	ACTB	Actin, beta
H03	Ocu.87	NM_001082253	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Ocu.1108	NM_001082277	LDHA	Lactate dehydrogenase A
H05	N/A	XM_002723383	LOC100346936	Non-POU domain containing, octamer-binding-like
H06	N/A	SA_00511	NGDC	Rabbit 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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT <sup>2</sup> SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT <sup>2</sup> SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

\* Larger kit sizes available; please inquire.

RT<sup>2</sup> 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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