

RT² Profiler PCR Array (Rotor-Gene® Format)

Dog Epithelial to Mesenchymal Transition (EMT)

Cat. no. 330231 PAFD-090ZR

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 Dog Epithelial to Mesenchymal Transition (EMT) RT² Profiler™ PCR Array profiles the expression of 84 key genes that either change their expression during this process or regulate those gene expression changes. EMT and the reciprocal mesenchymal to epithelial transition (MET) are key processes involved in both tumor metastasis and stem cell differentiation and development. During EMT, epithelial cells lose their apical and basolateral polarity, break their intercellular tight junctions, and degrade basement membrane extracellular matrix components to become migratory mesenchymal cells. As such, the array includes cell surface receptor, extracellular matrix, and cytoskeletal genes mediating cell adhesion, migration, motility, and morphogenesis; genes controlling cell differentiation, development, growth, and proliferation; as well as signal transduction and transcription factor genes that cause EMT and all of its associated processes. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in tumor metastasis or stem cell differentiation and development 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 cyclers (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	N/A	XM_014121013	AHNAK	AHNAK nucleoprotein
A02	N/A	XM_005623876	AKT1	V-akt murine thymoma viral oncogene homolog 1
A03	N/A	XM_846269	BMP1	Bone morphogenetic protein 1
A04	N/A	XM_534351	BMP2	Bone morphogenetic protein 2
A05	Cfa.8	NM_001197052	BMP7	Bone morphogenetic protein 7
A06	N/A	XM_005629597	CALD1	Caldesmon 1
A07	Cfa.3488	NM_001287125	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
A08	N/A	NM_001287156	CDH2	Cadherin 2, type 1, N-cadherin (neuronal)
A09	Cfa.1262	NM_001003187	COL1A2	Collagen, type I, alpha 2
A10	Cfa.3093	XM_845916	COL3A1	Collagen, type III, alpha 1
A11	N/A	XM_005640393	COL5A2	Collagen, type V, alpha 2
A12	N/A	XM_003638769	CTGF	Connective tissue growth factor-like
B01	Cfa.415	NM_001137652	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B02	Cfa.3718	XM_861837	DSC2	Desmocollin 2
B03	N/A	XM_545329	DSP	Desmoplakin
B04	Cfa.3903	XM_014120756	EGFR	Epidermal growth factor receptor
B05	N/A	XM_538226	ERBB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
B06	Cfa.3504	NM_001286958	ESR1	Estrogen receptor 1
B07	N/A	XM_005640879	F11R	F11 receptor
B08	Cfa.47867	XM_014110981	FN1	Fibronectin 1
B09	N/A	XM_014113959	FOXC2	Forkhead box C2 (MFH-1, mesenchyme forkhead 1)
B10	N/A	XM_545599	FZD7	Frizzled family receptor 7
B11	N/A	XM_005623351	GEMIN2	Gem (nuclear organelle) associated protein 2
B12	N/A	XM_847378	GNG11	Guanine nucleotide binding protein (G protein), gamma 11
C01	N/A	XM_005623927	GSC	Goosecoid homeobox
C02	N/A	XM_535751	GSK3B	Glycogen synthase kinase 3 beta
C03	N/A	XM_845091	IGFBP4	Insulin-like growth factor binding protein 4
C04	Cfa.3496	NM_001003096	IL1RN	Interleukin 1 receptor antagonist
C05	N/A	XM_534040	ILK	Integrin-linked kinase
C06	N/A	XM_005636739	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
C07	N/A	XM_014110784	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
C08	N/A	XM_005616948	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
C09	N/A	XM_005634783	JAG1	Jagged 1
C10	Cfa.46653	NM_001253741	KRT14	Keratin 14
C11	Cfa.21760	NM_001253742	KRT19	Keratin 19, type I
C12	N/A	XM_005636798	KRT7	Keratin 7
D01	N/A	XM_005618560	LOC488818	Fibroblast growth factor-binding protein 1-like
D02	N/A	XM_532014	LOC612942	Transmembrane protein with EGF-like and two follistatin-like domains 1

Position	UniGene	GenBank	Symbol	Description
D03	N/A	XM_535269	MAP1B	Microtubule-associated protein 1B
D04	Cfa.2682	NM_001003337	MITF	Microphthalmia-associated transcription factor
D05	Cfa.3597	XM_014109407	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
D06	Cfa.3447	NM_001002967	MMP3	Matrix metalloproteinase 3 (stromelysin 1, progelatinase)
D07	Cfa.3470	NM_001003219	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
D08	N/A	XM_005641418	M5N	Moesin
D09	Cfa.10759	XM_533823	MST1R	Macrophage stimulating 1 receptor (c-met-related tyrosine kinase)
D10	N/A	XM_546146	NODAL	Nodal homolog (mouse)
D11	N/A	XM_005625433	NOTCH1	Notch 1
D12	N/A	XM_005619008	NUDT13	Nudix (nucleoside diphosphate linked moiety X)-type motif 13
E01	Cfa.3606	NM_001003195	OCLN	Occludin
E02	Cfa.3909	NM_001003382	PDGFRB	Platelet-derived growth factor receptor, beta polypeptide
E03	N/A	XM_014115694	PLEK2	Pleckstrin 2
E04	N/A	XM_005627993	PTK2	Protein tyrosine kinase 2
E05	N/A	XM_538984	PTP4A1	Protein tyrosine phosphatase type IVA, member 1
E06	Cfa.40290	NM_001003274	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
E07	N/A	XM_014111292	RG52	Regulator of G-protein signaling 2, 24kDa
E08	Cfa.109	NM_001197095	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
E09	N/A	XM_005622830	SMAD2	SMAD family member 2
E10	N/A	XM_005635167	SNAI1	Snail family zinc finger 1
E11	Cfa.46828	NM_001097981	SNAI2	Snail homolog 2 (Drosophila)
E12	N/A	XM_846102	SNAI3	Snail homolog 3 (Drosophila)
F01	N/A	XM_538379	SOX10	SRY (sex determining region Y)-box 10
F02	N/A	XM_849889	SPARC	Secreted protein, acidic, cysteine-rich (osteonectin)
F03	Cfa.9240	XM_003434023	SPP1	Secreted phosphoprotein 1
F04	N/A	XM_548090	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
F05	N/A	XM_005628485	STEAP1	Six transmembrane epithelial antigen of the prostate 1
F06	N/A	XM_014122282	TCF3	Transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47)
F07	Cfa.3808	NM_001003268	TCF4	Transcription factor 4
F08	N/A	XM_849796	TCF7L1	Transcription factor 7-like 1 (T-cell specific, HMG-box)
F09	N/A	XM_532462	TFPI2	Tissue factor pathway inhibitor 2
F10	Cfa.3509	NM_001003309	TGFB1	Transforming growth factor, beta 1
F11	Cfa.3367	XM_545713	TGFB2	Transforming growth factor, beta 2
F12	Cfa.24656	XM_849026	TGFB3	Transforming growth factor, beta 3
G01	Cfa.3680	NM_001003182	TIMP1	TIMP metalloproteinase inhibitor 1
G02	N/A	XM_850086	TMEM132A	Transmembrane protein 132A
G03	N/A	XM_539449	TSPAN13	Tetraspanin 13
G04	N/A	XM_845879	TWIST1	Twist homolog 1 (Drosophila)
G05	N/A	XM_003434417	VCAN	Versican

Position	UniGene	GenBank	Symbol	Description
G06	Cfa.25093	NM_001287023	VIM	Vimentin
G07	N/A	XM_014117463	VPS13A	Vacuolar protein sorting 13 homolog A (<i>S. cerevisiae</i>)
G08	N/A	XM_542301	WNT11	Wingless-type MMTV integration site family, member 11
G09	Cfa.47426	NM_001287075	WNT5A	Wingless-type MMTV integration site family, member 5A
G10	N/A	XM_543883	WNT5B	Wingless-type MMTV integration site family, member 5B
G11	N/A	XM_003638879	ZEB1	Zinc finger E-box binding homeobox 1
G12	N/A	XM_005631964	ZEB2	Zinc finger E-box binding homeobox 2
H01	Cfa.17735	NM_001195845	ACTB	Actin, beta
H02	N/A	XM_535458	B2M	Beta-2-microglobulin
H03	Cfa.36213	NM_001003142	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Cfa.4551	NM_001003357	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	N/A	XM_014109387	RPLP1	Ribosomal protein, large, P1
H06	N/A	SA_00130	FGDC	Dog 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.

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.

Trademarks: QIAGEN[®], Rotor-Gene[®], Rotor-Disc[™] (QIAGEN Group); ROX[™] (Applied Biosystems Corporation or its subsidiaries); SYBR[®] (Molecular Probes, Inc.).

1067688 03/2011 © 2011 QIAGEN, all rights reserved.

www.qiagen.com

Canada ■ 800-572-9613

Ireland ■ 1800 555 049

Norway ■ 800-18859

China ■ 8621-3865-3865

Italy ■ 800-787980

Singapore ■ 1800-742-4368

Denmark ■ 80-885945

Japan ■ 03-6890-7300

Spain ■ 91-630-7050

Australia ■ 1-800-243-800

Finland ■ 0800-914416

Korea (South) ■ 080-000-7145

Sweden ■ 020-790282

Austria ■ 0800/281010

France ■ 01-60-920-930

Luxembourg ■ 8002 2076

Switzerland ■ 055-254-22-11

Belgium ■ 0800-79612

Germany ■ 02103-29-12000

Mexico ■ 01-800-7742-436

UK ■ 01293-422-911

Brazil ■ 0800-557779

Hong Kong ■ 800 933 965

The Netherlands ■ 0800 0229592

USA ■ 800-426-8157



Sample & Assay Technologies