

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Mouse Epithelial to Mesenchymal Transition

Cat. no. 330231 PAMM-090ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² 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 ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Mouse 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 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. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

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 (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Ahnak	Akt1	Bmp1	Bmp7	Cald1	Camk2n1	Cav2	Cdh1	Cdh2	Col1a2	Col3a1	Col5a2
B	Cttnb1	Dsc2	Dsp	Egfr	ErbB3	Esr1	F11r	Fgfbp1	Fn1	Foxc2	Fzd7	Gng11
C	Gsc	Gsk3b	Igfbp4	Il1rn	Ilk	Itga5	Itgav	Itgb1	Jag1	Krt14	Krt19	Krt7
D	Mif	Mmp2	Mmp3	Mmp9	Msn	Mst1r	Mtap1b	Nodal	Notch1	Nudt13	Ocln	Pdgfrb
E	Plek2	Pppde2	Plk2	Ptp4a1	Rac1	Rgs2	Serpine1	Sip1	Smad2	Snai1	Snai2	Snai3
F	Sox10	Sparc	Spp1	Stat3	Steap1	Tcf4	Tcf7l1	Tfpi2	Tgfb1	Tgfb2	Tgfb3	Timp1
G	Tmem1	Tmem132a	Tspan13	Twist1	Vcan	Vim	Vps13a	Wnt11	Wnt5a	Wnt5b	Zeb1	Zeb2
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.203866	NM_001039959	Ahnak	AHNAK nucleoprotein (desmoyokin)
A02	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A03	Mm.27757	NM_009755	Bmp1	Bone morphogenetic protein 1
A04	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
A05	Mm.308134	NM_145575	Cald1	Caldesmon 1
A06	Mm.41603	NM_025451	Camk2n1	Calcium/calmodulin-dependent protein kinase II inhibitor 1
A07	Mm.396075	NM_016900	Cav2	Caveolin 2
A08	Mm.35605	NM_009864	Cdh1	Cadherin 1
A09	Mm.257437	NM_007664	Cdh2	Cadherin 2
A10	Mm.277792	NM_007743	Col1a2	Collagen, type I, alpha 2
A11	Mm.249555	NM_009930	Col3a1	Collagen, type III, alpha 1
A12	Mm.10299	NM_007737	Col5a2	Collagen, type V, alpha 2
B01	Mm.291928	NM_007614	Cttnb1	Catenin (cadherin associated protein), beta 1
B02	Mm.280547	NM_013505	Dsc2	Desmocollin 2
B03	Mm.355327	NM_023842	Dsp	Desmoplakin
B04	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
B05	Mm.373043	NM_010153	ErbB3	V-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
B06	Mm.9213	NM_007956	Esr1	Estrogen receptor 1 (alpha)
B07	Mm.294882	NM_172647	F11r	F11 receptor
B08	Mm.46053	NM_008009	Fgfbp1	Fibroblast growth factor binding protein 1
B09	Mm.193099	NM_010233	Fn1	Fibronectin 1
B10	Mm.14092	NM_013519	Foxc2	Forkhead box C2
B11	Mm.297906	NM_008057	Fzd7	Frizzled homolog 7 (Drosophila)
B12	Mm.25547	NM_025331	Gng11	Guanine nucleotide binding protein (G protein), gamma 11
C01	Mm.129	NM_010351	Gsc	Goosecoid homeobox
C02	Mm.394930	NM_019827	Gsk3b	Glycogen synthase kinase 3 beta
C03	Mm.233799	NM_010517	Igfbp4	Insulin-like growth factor binding protein 4
C04	Mm.882	NM_031167	Il1rn	Interleukin 1 receptor antagonist
C05	Mm.274846	NM_010562	Ilk	Integrin linked kinase
C06	Mm.16234	NM_010577	Itga5	Integrin alpha 5 (fibronectin receptor alpha)
C07	Mm.227	NM_008402	Itgav	Integrin alpha V
C08	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
C09	Mm.22398	NM_013822	Jag1	Jagged 1
C10	Mm.439898	NM_016958	Krt14	Keratin 14
C11	Mm.439699	NM_008471	Krt19	Keratin 19
C12	Mm.289377	NM_033073	Krt7	Keratin 7
D01	Mm.333284	NM_008601	Mif	Microphthalmia-associated transcription factor
D02	Mm.29564	NM_008610	Mmp2	Matrix metalloproteinase 2
D03	Mm.4993	NM_010809	Mmp3	Matrix metalloproteinase 3
D04	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
D05	Mm.138876	NM_010833	Msn	Moesin
D06	Mm.3901	NM_009074	Mst1r	Macrophage stimulating 1 receptor (c-met-related tyrosine kinase)
D07	Mm.4173	NM_008634	Mtap1b	Microtubule-associated protein 1B
D08	Mm.57195	NM_013611	Nodal	Nodal
D09	Mm.290610	NM_008714	Notch1	Notch gene homolog 1 (Drosophila)

Position	UniGene	GenBank	Symbol	Description
D10	Mm.317636	NM_026341	Nudt13	Nudix (nucleoside diphosphate linked moiety X)-type motif 13
D11	Mm.4807	NM_008756	Ocln	Occludin
D12	Mm.4146	NM_008809	Pdgfrb	Platelet derived growth factor receptor, beta polypeptide
E01	Mm.103380	NM_013738	Plek2	Pleckstrin 2
E02	Mm.474453	NM_134095	Pppde2	PPPDE peptidase domain containing 2
E03	Mm.254494	NM_007982	Ptk2	PTK2 protein tyrosine kinase 2
E04	Mm.374437	NM_011200	Ptp4a1	Protein tyrosine phosphatase 4a1
E05	Mm.292510	NM_009007	Rac1	RAS-related C3 botulinum substrate 1
E06	Mm.28262	NM_009061	Rgs2	Regulator of G-protein signaling 2
E07	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
E08	Mm.35353	NM_025656	Sip1	Survival of motor neuron protein interacting protein 1
E09	Mm.391091	NM_010754	Smad2	MAD homolog 2 (Drosophila)
E10	Mm.2093	NM_011427	Snai1	Snail homolog 1 (Drosophila)
E11	Mm.4272	NM_011415	Snai2	Snail homolog 2 (Drosophila)
E12	Mm.103673	NM_013914	Snai3	Snail homolog 3 (Drosophila)
F01	Mm.276739	NM_011437	Sox10	SRY-box containing gene 10
F02	Mm.291442	NM_009242	Sparc	Secreted acidic cysteine rich glycoprotein
F03	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
F04	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
F05	Mm.85429	NM_027399	Steap1	Six transmembrane epithelial antigen of the prostate 1
F06	Mm.4269	NM_013685	Tcf4	Transcription factor 4
F07	Mm.440067	NM_009332	Tcf7l1	Transcription factor 7-like 1 (T-cell specific, HMG box)
F08	Mm.25612	NM_009364	Tfpi2	Tissue factor pathway inhibitor 2
F09	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
F10	Mm.18213	NM_009367	Tgfb2	Transforming growth factor, beta 2
F11	Mm.3992	NM_009368	Tgfb3	Transforming growth factor, beta 3
F12	Mm.8245	NM_011593	Timp1	Tissue inhibitor of metalloproteinase 1
G01	Mm.422686	NM_021436	Tmeff1	Transmembrane protein with EGF-like and two follistatin-like domains 1
G02	Mm.27387	NM_133804	Tmem132a	Transmembrane protein 132A
G03	Mm.254663	NM_025359	Tspan13	Tetraspanin 13
G04	Mm.3280	NM_011658	Twist1	Twist homolog 1 (Drosophila)
G05	Mm.158700	NM_001081249	Vcan	Versican
G06	Mm.268000	NM_011701	Vim	Vimentin
G07	Mm.211963	NM_173028	Vps13a	Vacuolar protein sorting 13A (yeast)
G08	Mm.22182	NM_009519	Wnt11	Wingless-related MMTV integration site 11
G09	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
G10	Mm.321818	NM_009525	Wnt5b	Wingless-related MMTV integration site 5B
G11	Mm.3929	NM_011546	Zeb1	Zinc finger E-box binding homeobox 1
G12	Mm.440702	NM_015753	Zeb2	Zinc finger E-box binding homeobox 2
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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 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 ² 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 ² 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.

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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