

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

Mouse Fibrosis

Cat. no. 330231 PAMM-120ZA

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 Fibrosis RT² Profiler PCR Array profiles the expression of 84 key genes involved in dysregulated tissue remodeling during the repair and healing of wounds. Wound healing consists of three phases: inflammation, granulation and tissue remodeling. During tissue remodeling, apoptosis removes myofibroblasts, and the deposited extracellular matrix (ECM) is remodeled to resemble the original tissue. Fibrosis occurs when inappropriate tissue remodeling results in excess ECM deposition due to inappropriate survival of myofibroblasts or lack of ECM proteolytic degradation. The inflammation and enhanced TGF β signaling often present in fibrotic tissues causes cells to differentiate into myofibroblasts via epithelial-to-mesenchymal transition (EMT). On the other side of the spectrum, chronic wounds feature dysregulated tissue remodeling with enhanced ECM degradation. This array contains genes encoding ECM remodeling enzymes, TGF β signaling molecules and inflammatory cytokines, as well as additional genes important for fibrosis. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in fibrosis and chronic wounds 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	Acta2	Agt	Akt1	Bcl2	Bmp7	Cav1	Ccl11	Ccl12	Ccl3	Ccr2	Cebpb	Col1a2
B	Col3a1	Ctgf	Cxcr4	Dcn	Edn1	Egf	Eng	Fasl	Grem1	Hgf	Ifng	Il10
C	Il13	Il13ra2	Il1a	Il1b	Il4	Il5	Ilk	Inhbe	Itga1	Itga2	Itga3	Itgav
D	Itgb1	Itgb3	Itgb5	Itgb6	Itgb8	Jun	Lox	Libp1	Mmp13	Mmp14	Mmp1a	Mmp2
E	Mmp3	Mmp8	Mmp9	Myc	Nfkb1	Pdgfa	Pdgfb	Plat	Plau	Plg	Serpina1a	Serpine1
F	Serpinh1	Smad2	Smad3	Smad4	Smad6	Smad7	Snai1	Sp1	Stat1	Stat6	Tgfb1	Tgfb2
G	Tgfb3	Tgfb1	Tgfb2	Tgfb1	Thbs1	Thbs2	Timp1	Timp2	Timp3	Timp4	Tnf	Vegfa
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.213025	NM_007392	Acta2	Actin, alpha 2, smooth muscle, aorta
A02	Mm.301626	NM_007428	Agt	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A03	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A04	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A05	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
A06	Mm.28278	NM_007616	Cav1	Caveolin 1, caveolae protein
A07	Mm.4686	NM_011330	Ccl11	Chemokine (C-C motif) ligand 11
A08	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A09	Mm.1282	NM_011337	Ccl3	Chemokine (C-C motif) ligand 3
A10	Mm.6272	NM_009915	Ccr2	Chemokine (C-C motif) receptor 2
A11	Mm.439656	NM_009883	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
A12	Mm.277792	NM_007743	Col1a2	Collagen, type I, alpha 2
B01	Mm.249555	NM_009930	Col3a1	Collagen, type III, alpha 1
B02	Mm.390287	NM_010217	Ctgf	Connective tissue growth factor
B03	Mm.1401	NM_009911	Cxcr4	Chemokine (C-X-C motif) receptor 4
B04	Mm.56769	NM_007833	Dcn	Decorin
B05	Mm.14543	NM_010104	Edn1	Endothelin 1
B06	Mm.252481	NM_010113	Egf	Epidermal growth factor
B07	Mm.225297	NM_007932	Eng	Endoglin
B08	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
B09	Mm.166318	NM_011824	Grem1	Gremlin 1
B10	Mm.267078	NM_010427	Hgf	Hepatocyte growth factor
B11	Mm.240327	NM_008337	Ifng	Interferon gamma
B12	Mm.874	NM_010548	Il10	Interleukin 10
C01	Mm.1284	NM_008355	Il13	Interleukin 13
C02	Mm.368330	NM_008356	Il13ra2	Interleukin 13 receptor, alpha 2
C03	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
C04	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
C05	Mm.276360	NM_021283	Il4	Interleukin 4
C06	Mm.4461	NM_010558	Il5	Interleukin 5
C07	Mm.274846	NM_010562	Ilk	Integrin linked kinase
C08	Mm.3510	NM_008382	Inhbe	Inhibin beta E
C09	Mm.482186	NM_001033228	Itga1	Integrin alpha 1
C10	Mm.5007	NM_008396	Itga2	Integrin alpha 2
C11	Mm.57035	NM_013565	Itga3	Integrin alpha 3
C12	Mm.227	NM_008402	Itgav	Integrin alpha V
D01	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
D02	Mm.87150	NM_016780	Itgb3	Integrin beta 3
D03	Mm.6424	NM_010580	Itgb5	Integrin beta 5
D04	Mm.98193	NM_021359	Itgb6	Integrin beta 6
D05	Mm.217000	NM_177290	Itgb8	Integrin beta 8
D06	Mm.275071	NM_010591	Jun	Jun oncogene
D07	Mm.172	NM_010728	Lox	Lysyl oxidase
D08	Mm.269747	NM_019919	Libp1	Latent transforming growth factor beta binding protein 1
D09	Mm.5022	NM_008607	Mmp13	Matrix metalloproteinase 13

Position	UniGene	GenBank	Symbol	Description
D10	Mm.280175	NM_008608	Mmp14	Matrix metalloproteinase 14 (membrane-inserted)
D11	Mm.156952	NM_032006	Mmp1a	Matrix metalloproteinase 1a (interstitial collagenase)
D12	Mm.29564	NM_008610	Mmp2	Matrix metalloproteinase 2
E01	Mm.4993	NM_010809	Mmp3	Matrix metalloproteinase 3
E02	Mm.16415	NM_008611	Mmp8	Matrix metalloproteinase 8
E03	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
E04	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
E05	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
E06	Mm.2675	NM_008808	Pdgfa	Platelet derived growth factor, alpha
E07	Mm.144089	NM_011057	Pdgfb	Platelet derived growth factor, B polypeptide
E08	Mm.154660	NM_008872	Plat	Plasminogen activator, tissue
E09	Mm.4183	NM_008873	Plau	Plasminogen activator, urokinase
E10	Mm.971	NM_008877	Plg	Plasminogen
E11	Mm.439692	NM_009243	Serpina1a	Serine (or cysteine) peptidase inhibitor, clade A, member 1a
E12	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F01	Mm.22708	NM_009825	Serpinh1	Serine (or cysteine) peptidase inhibitor, clade H, member 1
F02	Mm.391091	NM_010754	Smad2	MAD homolog 2 (Drosophila)
F03	Mm.7320	NM_016769	Smad3	MAD homolog 3 (Drosophila)
F04	Mm.100399	NM_008540	Smad4	MAD homolog 4 (Drosophila)
F05	Mm.325757	NM_008542	Smad6	MAD homolog 6 (Drosophila)
F06	Mm.34407	NM_001042660	Smad7	MAD homolog 7 (Drosophila)
F07	Mm.2093	NM_011427	Snai1	Snail homolog 1 (Drosophila)
F08	Mm.4618	NM_013672	Sp1	Trans-acting transcription factor 1
F09	Mm.277406	NM_009283	Stat1	Signal transducer and activator of transcription 1
F10	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
F11	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
F12	Mm.18213	NM_009367	Tgfb2	Transforming growth factor, beta 2
G01	Mm.3992	NM_009368	Tgfb3	Transforming growth factor, beta 3
G02	Mm.197552	NM_009370	Tgfb1r1	Transforming growth factor, beta receptor I
G03	Mm.172346	NM_009371	Tgfb1r2	Transforming growth factor, beta receptor II
G04	NM_009372	Tgif1	TGFB-induced factor homeobox 1	
G05	Mm.4159	NM_011580	Thbs1	Thrombospondin 1
G06	Mm.26688	NM_011581	Thbs2	Thrombospondin 2
G07	Mm.8245	NM_011593	Timp1	Tissue inhibitor of metalloproteinase 1
G08	Mm.206505	NM_011594	Timp2	Tissue inhibitor of metalloproteinase 2
G09	Mm.4871	NM_011595	Timp3	Tissue inhibitor of metalloproteinase 3
G10	Mm.255607	NM_080639	Timp4	Tissue inhibitor of metalloproteinase 4
G11	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G12	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
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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