

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

Pig Wound Healing

Cat. no. 330231 PASS-121ZA

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™



Description

The Pig Wound Healing RT² Profiler PCR Array profiles the expression of 84 key genes central to the wound healing response. Wound healing progresses via three overlapping phases: inflammation, granulation and tissue remodeling. After cutaneous injury, a blood clot forms, and inflammatory cells infiltrate the wound, secreting cytokines and growth factors to promote the inflammation phase. During the granulation phase, fibroblasts and other cells differentiate into myofibroblasts, which deposit extracellular matrix (ECM) proteins. Simultaneously, angiogenesis occurs, and keratinocytes proliferate and migrate to close the wound. In the final tissue remodeling phase, apoptosis eliminates myofibroblasts and extraneous blood vessels, and the ECM is remodeled to resemble the original tissue. Dysregulation of this last tissue remodeling phase leads to fibrosis. This array contains genes important for each of the three phases of wound healing, including ECM remodeling factors, inflammatory cytokines and chemokines, as well as growth factors and major signaling molecules. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in wound healing, tissue injury and repair 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	ACTC1	AKT1	ANGPT1	CCL2	CCN2	CD40LG	CDH1	COL14A1	COL1A1	COL1A2	COL3A1
B	COL4A3	COL5A2	COL5A3	CSF2	CSF3	CTNNB1	CTSK	CXCL11	CXCL12	CXCL2	DCN	EDN1
C	EGF	EGFR	EPHB2	F13A1	FGA	FGF2	FGF7	HBEGF	IFNG	IGF1	IL10	IL1A
D	IL1B	IL2	IL4	IL6ST	ITGA2	ITGA3	ITGA4	ITGA5	ITGA6	ITGAV	ITGB1	ITGB3
E	ITGB5	ITGB6	LOC1001540 47	LOC1005210 17	LOC1005250 86	LOC1006270 44	LOC1006270 56	LOC396677	MET	MIF	MMP1	MMP2
F	MMP3	MMP7	MMP9	MYLK	PGHS-2	PLAT	PLAU	PLG	PTEN	PTGS1	RAC1	SERPINE1
G	SM22A	SMAD3	STAT3	TGFA	TGFB1	TGFB2	TGFB3	TGFB3	TNC	TNF	VEGFA	VTN
H	ACTB	B2M	GAPDH	HRPT1	RPL13A	SGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Ssc.53896	NM_001164650	ACTA2	Actin, alpha 2, smooth muscle, aorta
A02	Ssc.61766	NM_001170517	ACTC1	Actin, alpha, cardiac muscle 1
A03	Ssc.75056	NM_001159776	AKT1	V-akt murine thymoma viral oncogene homolog 1
A04	Ssc.16730	NM_213959	ANGPT1	Angiotensinogen 1
A05	Ssc.657	NM_214214	CCL2	Chemokine (C-C motif) ligand 2
A06	Ssc.70001	NM_213833	CCN2	Connective tissue growth factor
A07	Ssc.15861	NM_214126	CD40LG	CD40 ligand
A08	Ssc.7538	NM_001163060	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
A09	Ssc.6778	XM_001924325	COL14A1	Collagen, type XIV, alpha 1
A10	Ssc.55931	XM_003483014	COL1A1	Collagen, type I, alpha 1
A11	N/A	NM_001243655	COL1A2	Collagen, type I, alpha 2
A12	Ssc.24309	NM_001243297	COL3A1	Collagen, type III, alpha 1
B01	Ssc.16254	XM_003362059	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)
B02	Ssc.16328	NM_001105289	COL5A2	Collagen, type V, alpha 2
B03	Ssc.16327	NM_001105288	COL5A3	Collagen, type V, alpha 3
B04	Ssc.382	NM_214118	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B05	Ssc.16151	NM_213842	CSF3	Colony stimulating factor 3 (granulocyte)
B06	Ssc.25839	NM_214367	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B07	Ssc.1020	NM_214302	CTSK	Cathepsin K
B08	Ssc.72492	NM_001128491	CXCL11	Chemokine (C-X-C motif) ligand 11
B09	Ssc.26221	NM_001009580	CXCL12	Chemokine (C-X-C motif) ligand 12
B10	Ssc.80308	XM_003356973	CXCL2	Chemokine (C-X-C motif) ligand 2
B11	Ssc.19012	NM_213920	DCN	Decorin
B12	Ssc.9364	NM_213882	EDN1	Endothelin 1
C01	Ssc.87	NM_214020	EGF	Epidermal growth factor
C02	Ssc.54725	NM_214007	EGFR	Epidermal growth factor receptor
C03	Ssc.50514	XM_003127693	EPHB2	EPH receptor B2
C04	Ssc.26345	XM_001927630	F13A1	Coagulation factor XIII, A1 polypeptide
C05	Ssc.4824	XM_003129130	FGA	Fibrinogen alpha chain
C06	Ssc.17772	XM_003129213	FGF2	Fibroblast growth factor 2 (basic)
C07	Ssc.15923	XM_003353365	FGF7	Fibroblast growth factor 7
C08	Ssc.16376	NM_214299	HBEGF	Heparin-binding EGF-like growth factor
C09	Ssc.4093	NM_213948	IFNG	Interferon-gamma
C10	Ssc.16231	NM_214256	IGF1	Insulin-like growth factor 1 (somatomedin C)
C11	Ssc.148	NM_214041	IL10	Interleukin 10
C12	Ssc.113	NM_214029	IL1A	Interleukin 1, alpha
D01	Ssc.28829	NM_214055	IL1B	Interleukin 1, beta
D02	Ssc.16224	NM_213861	IL2	Interleukin 2
D03	Ssc.15837	NM_214123	IL4	Interleukin 4
D04	Ssc.25033	NM_001097432	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
D05	Ssc.16218	XM_003133944	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
D06	Ssc.78753	XM_003131594	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)
D07	Ssc.5209	XM_003133517	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)

Position	UniGene	GenBank	Symbol	Description
D08	Ssc.16663	XM_001925252	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
D09	Ssc.28572	XM_001925637	ITGA6	Integrin, alpha 6
D10	Ssc.15932	NM_001083932	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
D11	Ssc.4621	NM_213968	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
D12	Ssc.44	NM_214002	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
E01	Ssc.26290	XM_003358781	ITGB5	Integrin, beta 5
E02	Ssc.23799	NM_001097423	ITGB6	Integrin, beta 6
E03	Ssc.29745	XM_001926764	LOC100154047	Cathepsin G-like
E04	Ssc.10351	XM_003127198	LOC100521017	Urokinase plasminogen activator surface receptor-like
E05	Ssc.74262	XM_003133924	LOC100525086	Fibroblast growth factor 10-like
E06	N/A	XM_003361297	LOC100627044	WNT1-inducible-signaling pathway protein 1-like
E07	N/A	XM_003358479	LOC100627056	Protein Wnt-5a-like
E08	Ssc.19907	NM_213785	LOC396677	Tissue factor
E09	Ssc.42717	NM_001038008	MET	Met proto-oncogene (hepatocyte growth factor receptor)
E10	Ssc.551	NM_001077213	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
E11	Ssc.16013	NM_001166229	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)
E12	Ssc.5713	NM_214192	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
F01	Ssc.15927	NM_001166308	MMP3	Matrix metalloproteinase 3 (stromelysin 1, progelatinase)
F02	Ssc.548	NM_214207	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
F03	Ssc.4086	NM_001038004	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F04	Ssc.16164	XM_001926784	MYLK	Myosin light chain kinase
F05	Ssc.23994	NM_214321	PGHS-2	Prostaglandin G/H synthase-2
F06	Ssc.196	NM_214054	PLAT	Plasminogen activator, tissue
F07	Ssc.11194	NM_213945	PLAU	Plasminogen activator, urokinase
F08	Ssc.65489	NM_001044590	PLG	Plasminogen
F09	Ssc.7652	NM_001143696	PTEN	Phosphatase and tensin homolog
F10	Ssc.1986	XM_001926129	PTGS1	Prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
F11	N/A	NM_001243585	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
F12	Ssc.9781	NM_213910	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
G01	Ssc.11913	XM_003129881	SM22A	Smooth muscle protein 22-alpha
G02	Ssc.15913	NM_214137	SMAD3	SMAD family member 3
G03	Ssc.3409	NM_001044580	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G04	Ssc.94427	NM_214251	TGFA	Transforming growth factor, alpha
G05	Ssc.76	NM_214015	TGFB1	Transforming growth factor, beta 1
G06	Ssc.10287	XM_003130499	TGFB2	Transforming growth factor, beta 2
G07	Ssc.27593	NM_214198	TGFB3	Transforming growth factor, beta 3
G08	Ssc.4253	NM_214272	TGFB3	Transforming growth factor, beta receptor III
G09	Ssc.16209	NM_214230	TNC	Tenascin C
G10	Ssc.100	NM_214022	TNF	Tumor necrosis factor
G11	Ssc.57541	NM_214084	VEGFA	Vascular endothelial growth factor A
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 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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