

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

Horse Wound Healing

Cat. no. 330231 PAEC-121Z

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 Horse 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, you 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	ANGPT1	CCL2	CCL7	CD40LG	CDH1	COL14A1	COL1A1	COL1A2	COL3A1	COL4A1
B	COL4A3	COL5A1	COL5A2	COL5A3	CSF2	CSF3	CTGF	CTNNB1	CTSG	CTSK	CTSL	CTSV
C	CXCL1	CXCL11	CXCL2	EGF	EGFR	F13A1	F3	FGA	FGF10	FGF2	FGF7	HGF
D	IFNG	IGF1	IL10	IL1B	IL2	IL4	IL6	IL6ST	ITGA1	ITGA2	ITGA3	ITGA4
E	ITGA5	ITGA6	ITGAV	ITGB1	ITGB3	ITGB5	ITGB6	MAPK1	MAPK3	MIF	MIP-2BETA	MMP1
F	MMP2	MMP7	MMP9	PDGFA	PLAT	PLAU	PLAUR	PLG	PTEN	PTGS2	RAC1	RHOA
G	SERPINE1	STAT3	TAGLN	TGFA	TGFB1	TGFB3	TIMP1	TNF	VEGFA	VTN	WISP1	WNT5A
H	ACTB	B2M	GAPDH	HPRT1	LOC100056766	EGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	N/A	XM_001503035	ACTA2	Actin, alpha 2, smooth muscle, aorta	PPE04289A
A02	N/A	XM_001503650	ACTC1	Actin, alpha, cardiac muscle 1	PPE03055A
A03	N/A	XM_001494946	ANGPT1	Angiopoietin 1	PPE02699A
A04	Eca.17895	NM_001081931	CCL2	Chemokine (C-C motif) ligand 2	PPE00321A
A05	N/A	XM_005597581	CCL7	Chemokine (C-C motif) ligand 7	PPE14766A
A06	N/A	XM_001490011	CD40LG	CD40 ligand-like	PPE09081A
A07	N/A	XM_001497018	CDH1	Cadherin-1-like	PPE13214A
A08	Eca.12977	NM_001163870	COL14A1	Collagen, type XIV, alpha 1	PPE00076A
A09	Eca.21651	XM_005597481	COL1A1	Collagen, type I, alpha 1	PPE00104A
A10	Eca.21335	XM_001492939	COL1A2	Collagen, type I, alpha 2	PPE01180A
A11	Eca.21624	XM_001917620	COL3A1	Collagen, type III, alpha 1	PPE00310A
A12	N/A	XM_005601380	COL4A1	Collagen, type IV, alpha 1	PPE05314A
B01	Eca.13392	XM_001493855	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)	PPE00417A
B02	N/A	XM_014736244	COL5A1	Collagen, type V, alpha 1	PPE16579A
B03	N/A	XM_001501817	COL5A2	Collagen, type V, alpha 2	PPE02072A
B04	N/A	XM_014741516	COL5A3	Collagen, type V, alpha 3	PPE16582A
B05	Eca.10972	NM_001081882	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)	PPE00190D
B06	Eca.426	NM_001081860	CSF3	Colony stimulating factor 3 (granulocyte)	PPE00141B
B07	N/A	XM_001503316	CTGF	Connective tissue growth factor-like	PPE15178A
B08	Eca.16809	NM_001122762	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa	PPE02325A
B09	N/A	XM_005603391	CTSG	Cathepsin G	PPE08835A
B10	N/A	XM_001490599	CTSK	Cathepsin K-like	PPE09223A
B11	N/A	XM_001495745	CTSL	Cathepsin L	PPE16585A
B12	N/A	XM_001494359	CTSV	Cathepsin V	PPE11441A
C01	Eca.18382	XM_001916175	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)	PPE00308A
C02	N/A	NM_001278930	CXCL11	Chemokine (C-X-C motif) ligand 11	PPE16069A
C03	Eca.13036	NM_001143955	CXCL2	Chemokine (C-X-C motif) ligand 2	PPE07121A
C04	N/A	XM_014737941	EGF	Epidermal growth factor	PPE16584A
C05	N/A	XM_005609152	EGFR	Epidermal growth factor receptor	PPE05714A
C06	N/A	XM_001492684	F13A1	Coagulation factor XIII, A1 polypeptide	PPE03795A
C07	N/A	XM_001491449	F3	Tissue factor-like	PPE10444A
C08	N/A	XM_001915158	FGA	Fibrinogen alpha chain	PPE06119A
C09	N/A	XM_001498109	FGF10	Fibroblast growth factor 10-like	PPE08357A
C10	Eca.12651	NM_001195221	FGF2	Fibroblast growth factor 2 (basic)	PPE00170A
C11	Eca.12645	NM_001163883	FGF7	Fibroblast growth factor 7	PPE00175A
C12	N/A	XM_001487849	HGF	Hepatocyte growth factor-like	PPE07246A
D01	Eca.721	NM_001081949	IFNG	Interferon, gamma	PPE00359A
D02	Eca.12985	NM_001082498	IGF1	Insulin-like growth factor 1 (somatomedin C)	PPE00373A
D03	Eca.13090	NM_001082490	IL10	Interleukin 10	PPE00364A
D04	Eca.13475	NM_001082526	IL1B	Interleukin 1, beta	PPE00403A
D05	Eca.12635	NM_001085433	IL2	Interleukin 2	PPE00378A
D06	Eca.11253	NM_001082519	IL4	Interleukin 4	PPE00395B

Position	UniGene	GenBank	Symbol	Description	Assay
D07	Eca.12956	NM_001082496	IL6	Interleukin 6 (interferon, beta 2)	PPE00372A
D08	N/A	XM_001495796	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)	PPE01173A
D09	Eca.16156	XM_005604280	ITGA1	Integrin, alpha 1	PPE04627A
D10	N/A	XM_005604279	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	PPE12097A
D11	N/A	XM_003362405	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)	PPE02616A
D12	N/A	XM_005601620	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	PPE05741A
E01	N/A	XM_001504571	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	PPE04951A
E02	N/A	XM_005601729	ITGA6	Integrin, alpha 6	PPE04797B
E03	Eca.16157	XM_005601735	ITGAV	Integrin, alpha V	PPE05907A
E04	Eca.1720	XM_003364340	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	PPE02258A
E05	Eca.12580	NM_001081802	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	PPE00052A
E06	N/A	XM_005602108	ITGB5	Integrin, beta 5	PPE14332A
E07	N/A	XM_001492864	ITGB6	Integrin, beta 6	PPE01030A
E08	N/A	XM_005612382	MAPK1	Mitogen-activated protein kinase 1	PPE10168A
E09	N/A	XM_001915525	MAPK3	Mitogen-activated protein kinase 3	PPE05321A
E10	N/A	XM_001489611	MIF	Macrophage migration inhibitory factor-like	PPE08729A
E11	Eca.563	NM_001143793	MIP-2BETA	CXCL3	PPE02633A
E12	Eca.13871	NM_001081847	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)	PPE00119A
F01	Eca.12657	XM_001493281	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	PPE00164A
F02	N/A	XM_001498809	MMP7	Matrilysin-like	PPE13880A
F03	Eca.13628	NM_001111302	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	PPE02744A
F04	N/A	XM_005598596	PDGFA	Platelet-derived growth factor alpha polypeptide	PPE09245A
F05	N/A	XM_001489274	PLAT	Plasminogen activator, tissue	PPE00618A
F06	N/A	XM_001502951	PLAU	Urokinase-type plasminogen activator-like	PPE15104A
F07	Eca.2157	NM_001163881	PLAUR	Plasminogen activator, urokinase receptor	PPE00127A
F08	N/A	XM_001500502	PLG	Plasminogen	PPE07535A
F09	N/A	XM_001917643	PTEN	Phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN-like	PPE11797A
F10	Eca.3397	NM_001081775	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	PPE00021A
F11	N/A	XM_014729779	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	PPE11597A
F12	Eca.2435	XM_001497759	RHOA	Transforming protein RhoA-like	PPE08617A
G01	Eca.12939	XM_001492517	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	PPE00150A
G02	Eca.15876	XM_001494631	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)	PPE01610A
G03	Eca.16123	NM_001110134	TAGLN	Transgelin	PPE04422A
G04	N/A	XM_005599909	TGFA	Transforming growth factor, alpha	PPE11152A
G05	Eca.6371	NM_001081849	TGFB1	Transforming growth factor, beta 1	PPE00123A
G06	N/A	XM_014740158	TGFBR3	Transforming growth factor beta receptor III	PPE16574A
G07	Eca.671	NM_001082515	TIMP1	TIMP metalloproteinase inhibitor 1	PPE00390A
G08	Eca.13019	NM_001081819	TNF	Tumor necrosis factor	PPE00070A
G09	Eca.12648	NM_001081821	VEGFA	Vascular endothelial growth factor A	PPE00074A
G10	N/A	XM_001504123	VTN	Vitronectin-like	PPE10645A
G11	N/A	XM_001498799	WISP1	WNT1-inducible-signaling pathway protein 1-like	PPE13872A
G12	N/A	XM_014731495	WNT5A	Wingless-type MMTV integration site family member 5A	PPE16573A
H01	Eca.20971	NM_001081838	ACTB	Actin, beta	PPE00105A
H02	Eca.13489	NM_001082502	B2M	Beta-2-microglobulin	PPE00377A
H03	Eca.487	NM_001163856	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPE00120A
H04	Eca.12727	XM_005614512	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPE00333A
H05	N/A	XM_001492042	LOC100056766	60S ribosomal protein L32-like	PPE09859A
H06	N/A horse	SA_00139	EGDC	Horse Genomic DNA Contamination	PPE16553A
H07	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H08	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H09	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H10	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H11	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H12	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A

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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