

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

Horse TGFB β / BMP Signaling Pathway

Cat. no. 330231 PAEC-235Z

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 TGFβ / BMP Signaling Pathway RT² Profiler™ PCR Array profiles the expression of 84 genes related to TGFβ / BMP-mediated signal transduction. The array includes members of the TGFβ superfamily of cytokines and their receptors. SMAD and SMAD target genes are included. Related genes including adhesion and extracellular molecules and transcription factors are included. Some of the genes involved in downstream cellular and developmental processes are also represented. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to TGFβ / BMP-mediated signal transduction 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	ACLY	ACTA2	ACVR1	ACVRL1	AGT	AIP1	AR	ATF3	ATF4	BACH1	BCL2L1	BDNF
B	BHLHE40	BRD2	CDC6	CDKN1B	CEBPB	CREB1	CREBBP	CRYAB	CTNNB1	E2F4	EMP1	ENG
C	EP300	EPHB2	FN1	FOS	FURIN	GADD45B	GLI2	GTF2I	HERPUD1	HES1	HEY1	HMOX1
D	HSP90AA1	ID1	ID2	ID3	IFRD1	IL10	KLF10	LOC100050531	MAP3K7	MAPK14	MAPK8	MBD1
E	ME2	MMP2	MSX2	MYC	MYOD1	NFIB	NFKBIA	NOTCH1	PAI-1	PDGFA	PITX2	PPARA
F	PTGS2	PTHLH	PTK2	PTK2B	RAD21	RBL1	RHOA	RHOB	RUNX1	RYBP	SHH	SMAD1
G	SMAD3	SMAD5	SMAD6	SNAI1	SP1	SREBF2	STC2	TGFβ2	TGFβR2	THBS1	TNFSF10	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	LOC100056766	EGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	N/A	XM_001495646	ACLY	ATP citrate lyase
A02	N/A	XM_001503035	ACTA2	Actin, alpha 2, smooth muscle, aorta
A03	N/A	XM_001491549	ACVR1	Activin A receptor, type I
A04	N/A	XM_001504352	ACVRL1	Activin A receptor type II-like 1
A05	N/A	XM_005602614	AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A06	N/A	XM_005597973	AIP1	Aryl hydrocarbon receptor interacting protein-like 1
A07	Eca.12664	NM_001163891	AR	Androgen receptor
A08	N/A	XM_001489102	ATF3	Cyclic AMP-dependent transcription factor ATF-3-like
A09	Eca.2410	XM_001499993	ATF4	Cyclic AMP-dependent transcription factor ATF-4-like
A10	N/A	XM_001499475	BACH1	BTB and CNC homology 1, basic leucine zipper transcription factor 1
A11	N/A	XM_005604550	BCL2L1	BCL2-like 1
A12	Eca.12477	NM_001081787	BDNF	Brain-derived neurotrophic factor
B01	N/A	XM_001496282	BHLHE40	Class E basic helix-loop-helix protein 40-like
B02	N/A	XM_001496232	BRD2	Bromodomain-containing protein 2-like
B03	N/A	XM_001497757	CDC6	Cell division cycle 6 homolog (S. cerevisiae)
B04	N/A	XM_005611046	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
B05	N/A	XM_005604776	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
B06	N/A	XM_001505119	CREB1	CAMP responsive element binding protein 1
B07	N/A	XM_001499349	CREBBP	CREB binding protein
B08	N/A	XM_001501779	CRYAB	Alpha-crystallin B chain-like
B09	Eca.16809	NM_001122762	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B10	N/A	XM_001915760	E2F4	Transcription factor E2F4-like
B11	N/A	XM_001501548	EMP1	Epithelial membrane protein 1-like
B12	N/A	XM_001500078	ENG	Endoglin
C01	N/A	XM_001502341	EP300	E1A binding protein p300
C02	N/A	XM_005607478	EPHB2	EPH receptor B2
C03	Eca.4569	XM_001489104	FN1	Fibronectin 1
C04	N/A	XM_001491972	FOS	Proto-oncogene c-Fos-like
C05	N/A	XM_001502725	FURIN	Furin (paired basic amino acid cleaving enzyme)
C06	N/A	XM_001493821	GADD45B	Growth arrest and DNA damage-inducible protein GADD45 beta-like
C07	N/A	XM_005601717	GLI2	GLI family zinc finger 2
C08	N/A	XM_001916284	GTF2I	General transcription factor Ili
C09	N/A	XM_005615247	HERPUD1	Homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1
C10	N/A	XM_001498844	HES1	Transcription factor HES-1-like
C11	N/A	XM_001914859	HEY1	Hairy/enhancer-of-split related with YRPW motif protein 1-like
C12	N/A	XM_005606579	HMOX1	Heme oxygenase (decycling) 1
D01	Eca.12996	NM_001163955	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1
D02	N/A	XM_005604549	ID1	Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
D03	N/A	XM_001503611	ID2	DNA-binding protein inhibitor ID-2-like
D04	N/A	XM_005607475	ID3	Inhibitor of DNA binding 3, dominant negative helix-loop-helix protein

Position	UniGene	GenBank	Symbol	Description
D05	N/A	XM_001501459	IFRD1	Interferon-related developmental regulator 1-like
D06	Eca.13090	NM_001082490	IL10	Interleukin 10
D07	N/A	XM_001493901	KLF10	Kruppel-like factor 10
D08	N/A	XM_001500502	LOC100050531	Plasminogen-like
D09	N/A	XM_001503780	MAP3K7	Mitogen-activated protein kinase kinase kinase 7
D10	N/A	XM_005604060	MAPK14	Mitogen-activated protein kinase 14
D11	N/A	XM_001500439	MAPK8	Mitogen-activated protein kinase 8
D12	N/A	XM_001499321	MBD1	Methyl-CpG binding domain protein 1
E01	N/A	XM_001499374	ME2	Malic enzyme 2, NAD(+)-dependent, mitochondrial
E02	Eca.12657	XM_001493281	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
E03	N/A	XM_001502790	MSX2	Homeobox protein MSX-2-like
E04	N/A	XM_001497991	MYC	Myc proto-oncogene protein-like
E05	N/A	XM_001504953	MYOD1	Myogenic differentiation 1
E06	N/A	XM_001493789	NFIB	Nuclear factor 1 B-type-like
E07	Eca.13685	XM_005603476	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
E08	N/A	XM_005606050	NOTCH1	Notch 1
E09	Eca.12939	XM_001492517	PAI-1	Plasminogen activator inhibitor-1
E10	N/A	XM_005598596	PDGFA	Platelet-derived growth factor alpha polypeptide
E11	N/A	XM_001916381	PITX2	Paired-like homeodomain 2
E12	N/A	NM_001242553	PPARA	Peroxisome proliferator-activated receptor alpha
F01	Eca.3397	NM_001081775	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F02	Eca.13002	NM_001163981	PTH1H	Parathyroid hormone-like hormone
F03	N/A	XM_005613308	PTK2	Protein tyrosine kinase 2
F04	N/A	XM_001915117	PTK2B	PTK2B protein tyrosine kinase 2 beta
F05	N/A	XM_001496307	RAD21	RAD21 homolog (S. pombe)
F06	N/A	XM_001499515	RBL1	Retinoblastoma-like 1 (p107)
F07	N/A	XM_001497759	RHOA	Transforming protein RhoA-like
F08	N/A	XM_005600187	RHOB	Ras homolog family member B
F09	N/A	XM_005615022	RUNX1	Runt-related transcription factor 1
F10	N/A	XM_005600472	RYBP	RING1 and YY1 binding protein
F11	N/A	XM_001914885	SHH	Sonic hedgehog protein-like
F12	Eca.12908	NM_001163882	SMAD1	SMAD family member 1
G01	Eca.12965	XM_005602977	SMAD3	SMAD family member 3
G02	Eca.12907	NM_001163888	SMAD5	SMAD family member 5
G03	Eca.12906	XM_001496374	SMAD6	SMAD family member 6
G04	N/A	XM_001501217	SNAIL	Zinc finger protein SNAIL1-like
G05	N/A	XM_003365244	SP1	Transcription factor Sp1-like
G06	N/A	XM_005606691	SREBF2	Sterol regulatory element binding transcription factor 2
G07	N/A	XM_005599226	STC2	Stanniocalcin 2
G08	N/A	XM_001489351	TGFB2	Transforming growth factor beta-2-like
G09	Eca.12902	XM_005600871	TGFBR2	Transforming growth factor, beta receptor II (70/80kDa)
G10	N/A	XM_001503599	THBS1	Thrombospondin 1
G11	N/A	XM_001494088	TNFSF10	Tumor necrosis factor ligand superfamily member 10-like
G12	Eca.12648	NM_001081821	VEGFA	Vascular endothelial growth factor A
H01	Eca.20971	NM_001081838	ACTB	Actin, beta
H02	Eca.13489	NM_001082502	B2M	Beta-2-microglobulin
H03	Eca.11842	NM_001163856	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Eca.12727	XM_005614512	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	N/A	XM_001492042	LOC100056766	60S ribosomal protein L32-like
H06	N/A horse	SA_00139	EGDC	Horse 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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