

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

Chicken TGF β / BMP Signaling Pathway

Cat. no. 330231 PAGG-035ZA

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 Chicken TGF β / BMP Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to TGF β / BMP-mediated signal transduction. The array includes members of the TGF β 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, research studies can easily and reliably analyze expression of a focused panel of genes related to TGF β / 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	ACVR1	ACVR2A	AMH	ATF4	BAMBI	BGLAP	BMP1	BMP2	BMP3	BMP4	BMP5	BMP6
B	BMP7	BMPER	BMPR1A	BMPR1B	BMPR2	CDKN1B	CDKN2B	CHRD	COL1A1	COL1A2	COMP	CREBBP
C	CUL1	DCN	E2F5	EMP1	ENG	FOS	FST	GADD45B	GDF2	GDF3	GDF5	GDF7
D	GSC	HERPUD1	HIPK2	ID1	ID2	IFRD1	IGF1	IGFBP3	IL6	INHBA	INHBB	INHBB
E	JUN	LTBP1	LTBP2	MECOM	MYC	NODAL	NOG	PDGFB	PLAU	RBL1	RBL2	RUNX1
F	SKP1	SMAD1	SMAD2	SMAD3	SMAD5	SMAD6	SMAD7	SMURF1	SOX4	STAT1	TGFB2	TGFB3
G	TGFB1	TGFB1	TGFB2	TGFB3	TGFB3	TGFB3	TGFB3	TGFB3	TGFB3	TGFB3	TGFB3	TGFB3
H	ACTB	H6PD	HMB5	RPL4	UBC	GGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Gga.2875	NM_204560	ACVR1	Activin A receptor, type I
A02	Gga.2852	NM_205367	ACVR2A	Activin A receptor, type IIA
A03	Gga.9749	NM_205030	AMH	Anti-Müllerian hormone
A04	Gga.3457	NM_204880	ATF4	Activating transcription factor 4 (tax-responsive enhancer element B67)
A05	Gga.35455	NM_001195401	BAMBI	BMP and activin membrane-bound inhibitor homolog (Xenopus laevis)
A06	Gga.11319	NM_205387	BGLAP	Bone gamma-carboxyglutamate (gla) protein
A07	Gga.272	XM_001236766	BMP1	Bone morphogenetic protein 1
A08	Gga.3950	NM_204358	BMP2	Bone morphogenetic protein 2
A09	Gga.32076	NM_001034819	BMP3	Bone morphogenetic protein 3 (osteogenic)
A10	Gga.686	NM_205237	BMP4	Bone morphogenetic protein 4
A11	Gga.620	NM_205148	BMP5	Bone morphogenetic protein 5
A12	Gga.40517	XM_418956	BMP6	Bone morphogenetic protein 6
B01	Gga.6770	XM_417496	BMP7	Bone morphogenetic protein 7
B02	Gga.7855	NM_001007080	BMPER	BMP binding endothelial regulator
B03	Gga.755	NM_205357	BMPR1A	Bone morphogenetic protein receptor, type IA
B04	Gga.607	NM_205132	BMPR1B	Bone morphogenetic protein receptor, type IB
B05	Gga.105	NM_001001465	BMPR2	Bone morphogenetic protein receptor, type II (serine/threonine kinase)
B06	Gga.17250	NM_204256	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
B07	Gga.5007	NM_204433	CDKN2B	Cyclin-dependent kinase inhibitor 2B (melanoma, p16, inhibits CDK4)
B08	Gga.490	NM_204980	CHRD	Chordin
B09	Gga.2073	XM_423116	COL1A1	Alpha-1 collagen (I)
B10	Gga.5097	NM_001079714	COL1A2	Collagen, type I, alpha 2
B11	Gga.11142	XM_418238	COMP	Cartilage oligomeric matrix protein
B12	N/A	XM_414964	CREBBP	CREB binding protein (Rubinstein-Taybi syndrome)
C01	Gga.16583	XM_418878	CUL1	Cullin 1
C02	Gga.1719	NM_001030747	DCN	Decorin
C03	Gga.22625	NM_001030942	E2F5	E2F transcription factor 5, p130-binding
C04	Gga.8392	XM_416203	EMP1	Epithelial membrane protein 1
C05	Gga.31780	NM_001080887	ENG	Endoglin
C06	Gga.8709	NM_205508	FOS	FBJ murine osteosarcoma viral oncogene homolog
C07	Gga.3615	NM_205200	FST	Follistatin
C08	Gga.11726	NM_001044666	GADD45B	Growth arrest and DNA-damage-inducible, beta
C09	Gga.811	NM_205432	GDF2	Growth differentiation factor 2
C10	Gga.4324	NM_205211	GDF3	Growth differentiation factor 3
C11	Gga.3403	NM_204338	GDF5	Growth differentiation factor 5
C12	N/A	XR_026709	GDF7	Growth differentiation factor 7
D01	Gga.738	NM_205331	GSC	Goosecoid homeobox
D02	Gga.9872	XM_414010	HERPUD1	Homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1
D03	Gga.12888	XM_416335	HIPK2	Homeodomain interacting protein kinase 2
D04	Gga.892	NM_204590	ID1	Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
D05	Gga.3125	NM_205002	ID2	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
D06	Gga.2458	NM_001001468	IFRD1	Interferon-related developmental regulator 1
D07	Gga.850	NM_001004384	IGF1	Insulin-like growth factor 1 (somatomedin C)
D08	Gga.11476	NM_001101034	IGFBP3	Insulin-like growth factor binding protein 3

Position	UniGene	GenBank	Symbol	Description
D09	Gga.2769	NM_204628	IL6	Interleukin 6 (interferon, beta 2)
D10	Gga.6881	NM_001031257	INHHA	Inhibin, alpha
D11	Gga.3982	NM_205396	INHBA	Inhibin, beta A
D12	Gga.520	NM_205206	INHBB	Inhibin, beta B
E01	Gga.1473	NM_001031289	JUN	Jun proto-oncogene
E02	Gga.23353	XM_419510	LTBP1	Latent transforming growth factor beta binding protein 1
E03	Gga.38159	XM_426444	LTBP2	Latent transforming growth factor beta binding protein 2
E04	Gga.30267	XM_422804	MECOM	Ecotropic viral integration site 1
E05	Gga.1030	NM_001030952	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
E06	Gga.28	XM_424385	NODAL	Nodal homolog (mouse)
E07	Gga.449	NM_204123	NOG	Noggin
E08	Gga.71	NM_204270	PDGFB	Platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-sis) oncogene homolog)
E09	Gga.817	NM_205443	PLAU	Plasminogen activator, urokinase
E10	Gga.1927	XM_417312	RBL1	Retinoblastoma-like 1 (p107)
E11	Gga.43165	XM_414087	RBL2	Retinoblastoma-like 2 (p130)
E12	Gga.45609	NM_205227	RUNX1	Ch-run1B2
F01	Gga.1718	NM_001006153	SKP1	S-phase kinase-associated protein 1
F02	Gga.1380	NM_001201455	SMAD1	SMAD family member 1
F03	Gga.44120	NM_204561	SMAD2	SMAD family member 2
F04	Gga.44055	NM_204475	SMAD3	SMAD family member 3
F05	Gga.44385	NM_001014968	SMAD5	SMAD family member 5
F06	Gga.3878	NM_204248	SMAD6	SMAD family member 6
F07	Gga.25525	XM_427238	SMAD7	SMAD family member 7
F08	Gga.20622	XM_414794	SMURF1	SMAD specific E3 ubiquitin protein ligase 1
F09	Gga.9314	NM_204484	SOX4	SRY (sex determining region Y)-box 4
F10	Gga.41913	NM_001012914	STAT1	Signal transducer and activator of transcription 1, 91kDa
F11	N/A	XM_003640970	TGFB2	Transforming growth factor, beta 2
F12	Gga.42150	NM_205454	TGFB3	Transforming growth factor, beta 3
G01	Gga.2582	NM_205036	TGFB1	Transforming growth factor, beta-induced, 68kDa
G02	Gga.143	NM_204246	TGFB1	Transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kDa)
G03	Gga.2645	NM_205428	TGFB2	Transforming growth factor, beta receptor II (70/80kDa)
G04	Gga.804	NM_204339	TGFB3	Transforming growth factor, beta receptor III
G05	Gga.43974	XM_416922	TGFBAP1	Transforming growth factor, beta receptor associated protein 1
G06	Gga.768	NM_205379	TGIF1	TGFB-induced factor homeobox 1
G07	Gga.10300	NM_001199453	THBS1	Thrombospondin 1
G08	Gga.797	NM_001001755	THBS2	Thrombospondin 2
G09	Gga.1980	XM_424763	THBS4	Thrombospondin 4
G10	Gga.8774	NM_204379	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G11	Gga.1798	NM_001012760	TSC22D1	TSC22 domain family, member 1
G12	Gga.10894	XM_424894	ZFYVE16	Hypothetical LOC427315
H01	Gga.6076	NM_205518	ACTB	Actin, beta
H02	Gga.44427	XM_425746	H6PD	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
H03	Gga.8480	XM_417846	HMBS	Hydroxymethylbilane synthase
H04	Gga.4523	NM_001007479	RPL4	Ribosomal protein L4
H05	Gga.39142	XM_001234599	UBC	Ubiquitin C
H06	N/A	SA_00517	GGDC	Chicken 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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