RT² Profiler PCR Array (Rotor-Gene® Format)

Cow WNT Signaling Pathway

Cat. no. 330231 PABT-043ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Cow WNT Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to WNT-mediated signal transduction. The WNT family of secreted growth factors regulates the developmental processes of cell fate and polarity, as well as general cell maintenance processes such as homeostasis and cell cycle regulation. There are many WNT ligands in cows, which bind to the Frizzled (FZD) family of receptors and the co-receptors LRP5 and LRP6. WNT signaling comprises three pathways: the canonical pathway and two non-canonical pathways, planar cell polarity (PCP) and a calcium ion-dependent pathway. The well-studied canonical WNT pathway signals through ß-catenin and regulates the cell cycle, cell growth, and proliferation. The PCP pathway regulates cytoskeletal dynamics and cell motility, and the WNT/calcium pathway promotes NFAT transcription, both independently of β-catenin signaling. This array contains WNT signaling ligands and receptors as well as other downstream signaling molecules for all three pathways. In addition, regulators of WNT signaling are included as well as downstream target genes. A set of controls present on each array enables data analysis using the ΔΔCT method of relative quantification as well as assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze expression of a focused panel of genes related to WNT-mediated signal transduction with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	Bt.9945	NM_001128497	AES	Amino-terminal enhancer of split	PPB02484A
A02	Bt.11086	NM_001075986	APC	Adenomatous polyposis coli	PPB09551A
A03	Bt.21602	NM_001191398	AXIN1	Axin 1	PPB02057A
A04	Bt.4412	NM_001192299	AXIN2	Axin 2	PPB04933A
A05	N/A	XM_010803098	BCL9	B-cell CLL/lymphoma 9	PPB15569A
A06	Bt.25271	NM_001083475	BTRC	Beta-transducin repeat containing	PPB09817A
A07	Bt.88783	NM_001046273	CCND1	Cyclin D1	PPB08078A
A08	Bt.4895	NM_001076372	CCND2	Cyclin D2	PPB13224A
A09	Bt.65222	NM_174711	CSNK1A1	Casein kinase 1, alpha 1	PPB01183A
A10	Bt.64603	NM_174635	CSNK2A1	Casein kinase 2, alpha 1 polypeptide	PPB01078A
A11	Bt.1780	XM_010806373	CTBP1	C-terminal binding protein 1	PPB05500A
A12	Bt.33687	NM_001076141	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa	PPB11146B
B01	Bt.8208	NM_001081588	DAAM1	Dishevelled associated activator of morphogenesis 1	PPB05746A
B02	Bt.15382	NM_001193246	DAB2	Disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila)	PPB03978A
B03	N/A	XM_002693011	DIXDC1	DIX domain containing 1	PPB12362A
B04	Bt.13880	NM_001205544	DKK1	Dickkopf homolog 1 (Xenopus laevis)	PPB02092A
B05	Bt.18710	NM_001100306	DKK3	Dickkopf homolog 3 (Xenopus laevis)	PPB02989A
B06	Bt.27892	NM_001206601	DVL1	Dishevelled, dsh homolog 1 (Drosophila)	PPB07885A
B07	Bt.17972	NM_001191382	DVL2	Dishevelled, dsh homolog 2 (Drosophila)	PPB12840A
B08	Bt.30467	XM_002696250	FBXW11	F-box and WD repeat domain containing 11	PPB12057A
B09	Bt.26327	NM_001101985	FBXW4	F-box and WD repeat domain containing 4	PPB05835A
B10	Bt.62944	NM_001040605	FGF4	Fibroblast growth factor 4	PPB14309A
B11	Bt.17885	NM_001205985	FOSL1	FOS-like antigen 1	PPB09137A
B12	Bt.88317	NM_001192452	FOXN1	Forkhead box N1	PPB06816A
C01	N/A	XM_002698415	FRAT1	Frequently rearranged in advanced T-cell lymphomas	PPB02604A
C02	Bt.121	NM_174059	FRZB	Frizzled-related protein	PPB00290A
C03	Bt.26635	NM_001101048	FZD1	Frizzled family receptor 1	PPB01894A
C04	Bt.79602	NM_001192964	FZD3	Frizzled family receptor 3	PPB01896A
C05	Bt.76547	NM_001206269	FZD4	Frizzled family receptor 4	PPB01893A
C06	N/A	XM_005197510	FZD5	Frizzled family receptor 5	PPB10884A
C07	Bt.104004	XM_863880	FZD6	Frizzled homolog 6 (Drosophila)	PPB01895A
C08	Bt.105583	NM_001144091	FZD7	Frizzled family receptor 7	PPB08035A
C09	N/A	XM_005214320	FZD8	Frizzled family receptor 8	PPB13787A
C10	N/A	XM_002698189	FZD9	Frizzled family receptor 9	PPB07577A
C11	Bt.33944	NM_001102192	GSK3A	Glycogen synthase kinase 3 alpha	PPB10474A
C12	Bt.48740	NM_001101310	GSK3B	Glycogen synthase kinase 3 beta	PPB15734B
D01	Bt.11159	NM_001077827	JUN	Jun proto-oncogene	PPB00089A
D02	N/A	XM_010814133	KREMEN1	Kringle containing transmembrane protein 1	PPB08053A
D03	Bt.18467	NM_001192856	LEF1	Lymphoid enhancer-binding factor 1	PPB10257A
D04	Bt.45360	XM_010821189	LRP5	Low density lipoprotein receptor-related protein 5	PPB09954A
D05	Bt.60913	XM_002687783	LRP6	Low density lipoprotein receptor-related protein 6	PPB10433A
D06	Bt.14050	NM_001192974	MAPK8	Mitogen-activated protein kinase 8	PPB11673A
D07	Bt.13092	NM_001075130	MMP7	Matrix metallopeptidase 7 (matrilysin, uterine)	PPB01257A
D08	Bt.21164	NM_001046074	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)	PPB04718A
D09	Bt.45162	NM_001166615	NFATC1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	PPB04778A
D10	Bt.60075	NM_001105453	NKD1	Naked cuticle homolog 1 (Drosophila)	PPB14343A
D11	Bt.43996	NM_001193253	NLK	Nemo-like kinase	PPB03212A
D12	Bt.18496	NM_001097991	PITX2	Paired-like homeodomain 2	PPB03019A
E01	Bt.38004	NM_001101208	PORCN	Porcupine homolog (Drosophila)	PPB11914A
E02	Bt.13264	NM_001083636	PPARD	Peroxisome proliferator-activated receptor delta	PPB01566A
E03	Bt.57449	NM_001102534	PRICKLE1	Prickle homolog 1 (Drosophila)	PPB15220A
E04	N/A	XM_002690892	PYGO1	Pygopus homolog 1 (Drosophila)	PPB08513A
E05	Bt.49678	NM_176645	RHOA	Ras homolog gene family, member A	PPB01515A
E06	Bt.2846	NM_001098147	RHOU	Ras homolog gene family, member U	PPB14793A
E07	Bt.41723	NM_001101076	RUVBL1	RuvB-like 1 (E. coli)	PPB04876A

Position	UniGene	GenBank	Symbol	Description	Assay
E08	Bt.5226	NM_174460	SFRP1	Secreted frizzled-related protein 1	PPB00848A
E09	Bt.3540	NM_001075764	SFRP4	Secreted frizzled-related protein 4	PPB07021A
E10	Bt.112292	NM_001206251	SOX17	SRY (sex determining region Y)-box 17	PPB09789A
E11	Bt.44634	NM_001099186	TCF7	Transcription factor 7 (T-cell specific, HMG-box)	PPB14963A
E12	N/A	XM_002691408	TCF7L1	Transcription factor 7-like 1 (T-cell specific, HMG-box)	PPB06380B
F01	Bt.3589	NM_001098020	TLE1	Transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)	PPB05407A
F02	Bt.87234	NM_001205875	VANGL2	Vang-like 2 (van gogh, Drosophila)	PPB07464A
F03	Bt.63013	NM_001075996	WIF1	WNT inhibitory factor 1	PPB09685A
F04	N/A	XM_005215320	WISP1	WNT1 inducible signaling pathway protein 1	PPB11235A
F05	Bt.101628	NM_001114191	WNT1	Wingless-type MMTV integration site family, member 1	PPB12068A
F06	Bt.61102	NM_001099078	WNT10A	Wingless-type MMTV integration site family, member 10A	PPB10602A
F07	Bt.21876	NM_001082456	WNT11	Wingless-type MMTV integration site family, member 11	PPB12443A
F08	Bt.37171	NM_001014949	WNT16	Wingless-type MMTV integration site family, member 16	PPB10933A
F09	Bt.37360	NM_001013001	WNT2	Wingless-type MMTV integration site family member 2	PPB01931A
F10	Bt.27254	NM_001099363	WNT2B	Wingless-type MMTV integration site family, member 2B	PPB01897A
F11	Bt.112395	NM_001206024	WNT3	Wingless-type MMTV integration site family, member 3	PPB12122A
F12	N/A	XM_010806514	WNT3A	Wingless-type MMTV integration site family, member 3A	PPB07762A
G01	Bt.88484	NM_001205971	WNT5A	Wingless-type MMTV integration site family, member 5A	PPB08937A
G02	Bt.6367	NM_001205628	WNT5B	Wingless-type MMTV integration site family, member 5B	PPB03515A
G03	Bt.27385	NM_001205563	WNT6	Wingless-type MMTV integration site family, member 6	PPB02360A
G04	Bt.69615	NM_001192788	WNT7A	Wingless-type MMTV integration site family, member 7A	PPB09713A
G05	N/A	XM_603482	LOC525135	Wingless-type MMTV integration site family, member 7B	PPB08171A
G06	Bt.106446	NM_001192370	WNT8A	Wingless-type MMTV integration site family, member 8A	PPB11818A
G07	N/A	XM_002688510	WNT9A	Wingless-type MMTV integration site family, member 9A	PPB04817A
G08	Bt.17918	NM_174739	CBY1	Chibby homolog 1 (Drosophila)	PPB01214A
G09	Bt.24868	NM_001082615	DKK2	Dickkopf homolog 2 (Xenopus laevis)	PPB12339A
G10	N/A	XM_010820369	DKK4	Dickkopf homolog 4 (Xenopus laevis)	PPB04026A
G11	Bt.9084	XM_010819270	KREMEN2	Kringle containing transmembrane protein 2	PPB14327A
G12	N/A	XM_001254723	MAP2K7	Mitogen-activated protein kinase kinase 7	PPB15418A
H01	Bt.14186	NM_173979	ACTB	Actin, beta	PPB00173A
H02	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPB00298A
H03	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPB00330A
H04	Bt.22662	NM_001075742	TBP	TATA box binding protein	PPB06797A
H05	Bt.111451	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	PPB01343A
H06	N/A	SA_00137	BGDC	Cow Genomic DNA Contamination	PPB71596A
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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² SYBR Green ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

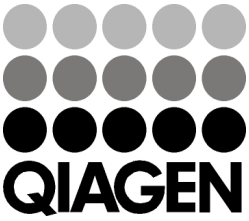
* Larger kit sizes available; please inquire.

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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

www.qiagen.com

Australia ▪ 1-800-243-800
Austria ▪ 0800/281010
Belgium ▪ 0800-79612
Brazil ▪ 0800-557779
Canada ▪ 800-572-9613
China ▪ 8621-3865-3865
Denmark ▪ 80-885945
Finland ▪ 0800-914416
France ▪ 01-60-920-930
Germany ▪ 02103-29-12000
Hong Kong ▪ 800 933 965
Ireland ▪ 1800 555 049
Italy ▪ 800-787980
Japan ▪ 03-6890-7300
Korea (South) ▪ 080-000-7145
Luxembourg ▪ 8002 2076
Mexico ▪ 01-800-7742-436
The Netherlands ▪ 0800 0229592
Norway ▪ 800-18859
Singapore ▪ 1800-742-4368
Spain ▪ 91-630-7050
Sweden ▪ 020-790282
Switzerland ▪ 055-254-22-11
UK ▪ 01293-422-911
USA ▪ 800-426-8157



Sample & Assay Technologies