

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

Human WNT Signaling Pathway

Cat. no. 330231 PAHS-243ZA

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 Human WNT Signaling Targets RT² Profiler PCR Array profiles the expression of 84 key genes responsive to WNT signal transduction. The WNT family of secreted growth factors regulates development and differentiation as well as general cell maintenance processes such as migration and cell cycle regulation. The WNT ligands bind to Frizzled (FZD) receptor family members and activate one of three WNT pathways: the canonical pathway, planar cell polarity (PCP), and a calcium ion-dependent pathway. The well-studied and better characterized canonical WNT pathway signals through β -catenin and regulates cell cycle, cell growth, and proliferation. Dysregulation of the canonical WNT signal transduction pathway is associated with cancer and developmental diseases. Many target genes of the canonical WNT pathway have been identified using experimental techniques such as chromatin immunoprecipitation (ChIP) and gene expression studies, while similar analyses for the PCP and a calcium ion-dependent pathways have yet be performed. This array includes WNT canonical signaling pathway transcription factors and highly relevant target genes identified by multiple studies. Results obtained with this array can be used to analyze activation or inhibition of WNT signaling. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in WNT-regulated cellular processes 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	ABCB1	AHR	ANGPTL4	ANTXR1	AXIN2	BGLAP	BIRC5	BMP4	BTRC	CACNA2D3	CCND1	CCND2
B	CD44	CDH1	CDKN2A	CDON	CEBPD	CTGF	CUBN	DAB2	DKK1	DLK1	DPP10	EFNB1
C	EGFR	EGR1	ETS2	FGF20	FGF4	FGF7	FGF9	FN1	FOSL1	FST	FZD7	GDF5
D	GDNF	GJA1	ID2	IGF1	IGF2	IL6	IRS1	JAG1	KLF5	LEF1	LRP1	MET
E	MMP2	MMP7	MMP9	MYC	NANOG	NRCAM	NRP1	NTRK2	PDGFRA	PITX2	PLAUR	POU5F1
F	PPAP2B	PPARD	PTCH1	PTGS2	RUNX2	SFRP2	SIX1	SMO	SOX2	SOX9	T	TCF4
G	TCF7	TCF7L1	TCF7L2	TGFB3	TLE1	TWIST1	VEGFA	WISP1	WISP2	WNT3A	WNT5A	WNT9A
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.489033	NM_000927	ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1
A02	Hs.171189	NM_001621	AHR	Aryl hydrocarbon receptor
A03	Hs.9613	NM_001039667	ANGPTL4	Angiopietin-like 4
A04	Hs.165859	NM_018153	ANTXR1	Anthrax toxin receptor 1
A05	Hs.156527	NM_004655	AXIN2	Axin 2
A06	Hs.654541	NM_199173	BGLAP	Bone gamma-carboxyglutamate (gla) protein
A07	Hs.728893	NM_001168	BIRC5	Baculoviral IAP repeat containing 5
A08	Hs.68879	NM_130851	BMP4	Bone morphogenetic protein 4
A09	Hs.643802	NM_033637	BTRC	Beta-transducin repeat containing
A10	Hs.656687	NM_018398	CACNA2D3	Calcium channel, voltage-dependent, alpha 2/delta subunit 3
A11	Hs.523852	NM_053056	CCND1	Cyclin D1
A12	Hs.376071	NM_001759	CCND2	Cyclin D2
B01	Hs.502328	NM_000610	CD44	CD44 molecule (Indian blood group)
B02	Hs.461086	NM_004360	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
B03	Hs.512599	NM_000077	CDKN2A	Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
B04	Hs.38034	NM_016952	CDON	Cdon homolog (mouse)
B05	Hs.440829	NM_005195	CEBPD	CCAAT/enhancer binding protein (C/EBP), delta
B06	Hs.591346	NM_001901	CTGF	Connective tissue growth factor
B07	Hs.166206	NM_001081	CUBN	Cubilin (intrinsic factor-cobalamin receptor)
B08	Hs.481980	NM_001343	DAB2	Disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila)
B09	Hs.40499	NM_012242	DKK1	Dickkopf homolog 1 (Xenopus laevis)
B10	Hs.533717	NM_003836	DLK1	Delta-like 1 homolog (Drosophila)
B11	Hs.591555	NM_020868	DPP10	Dipeptidyl-peptidase 10 (non-functional)
B12	Hs.144700	NM_004429	EFNB1	Ephrin-B1
C01	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
C02	Hs.326035	NM_001964	EGR1	Early growth response 1
C03	Hs.644231	NM_005239	ETS2	V-Ets erythroblastosis virus E26 oncogene homolog 2 (avian)
C04	Hs.199905	NM_019851	FGF20	Fibroblast growth factor 20
C05	Hs.1755	NM_002007	FGF4	Fibroblast growth factor 4
C06	Hs.567268	NM_002009	FGF7	Fibroblast growth factor 7
C07	Hs.111	NM_002010	FGF9	Fibroblast growth factor 9 (glia-activating factor)
C08	Hs.203717	NM_002026	FN1	Fibronectin 1
C09	Hs.283565	NM_005438	FOSL1	FOS-like antigen 1
C10	Hs.9914	NM_006350	FST	Follistatin
C11	Hs.173859	NM_003507	FZD7	Frizzled family receptor 7
C12	Hs.1573	NM_000557	GDF5	Growth differentiation factor 5
D01	Hs.248114	NM_000514	GDNF	Glial cell derived neurotrophic factor
D02	Hs.74471	NM_000165	GJA1	Gap junction protein, alpha 1, 43kDa
D03	Hs.180919	NM_002166	ID2	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
D04	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
D05	Hs.523414	NM_000612	IGF2	Insulin-like growth factor 2 (somatomedin A)
D06	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D07	Hs.471508	NM_005544	IRS1	Insulin receptor substrate 1
D08	Hs.728907	NM_000214	JAG1	Jagged 1
D09	Hs.508234	NM_001730	KLF5	Kruppel-like factor 5 (intestinal)

Position	UniGene	GenBank	Symbol	Description
D10	Hs.555947	NM_016269	LEF1	Lymphoid enhancer-binding factor 1
D11	Hs.162757	NM_002332	LRP1	Low density lipoprotein receptor-related protein 1
D12	Hs.132966	NM_000245	MET	Met proto-oncogene (hepatocyte growth factor receptor)
E01	Hs.513617	NM_004530	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
E02	Hs.2256	NM_002423	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
E03	Hs.297413	NM_004994	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
E04	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
E05	Hs.661360	NM_024865	NANOG	Nanog homeobox
E06	Hs.21422	NM_005010	NRCAM	Neuronal cell adhesion molecule
E07	Hs.131704	NM_003873	NRP1	Neuropilin 1
E08	Hs.494312	NM_006180	NTRK2	Neurotrophic tyrosine kinase, receptor, type 2
E09	Hs.74615	NM_006206	PDGFRA	Platelet-derived growth factor receptor, alpha polypeptide
E10	Hs.643588	NM_000325	PITX2	Paired-like homeodomain 2
E11	Hs.466871	NM_002659	PLAUR	Plasminogen activator, urokinase receptor
E12	Hs.249184	NM_002701	POU5F1	POU class 5 homeobox 1
F01	Hs.405156	NM_003713	PPAP2B	Phosphatidic acid phosphatase type 2B
F02	Hs.696032	NM_006238	PPARD	Peroxisome proliferator-activated receptor delta
F03	Hs.494538	NM_000264	PTCH1	Patched 1
F04	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F05	Hs.535845	NM_004348	RUNX2	Runt-related transcription factor 2
F06	Hs.481022	NM_003013	SFRP2	Secreted frizzled-related protein 2
F07	Hs.716658	NM_005982	SIX1	SIX homeobox 1
F08	Hs.437846	NM_005631	SMO	Smoothed, frizzled family receptor
F09	Hs.518438	NM_003106	SOX2	SRY (sex determining region Y)-box 2
F10	Hs.647409	NM_000346	SOX9	SRY (sex determining region Y)-box 9
F11	Hs.389457	NM_003181	T	T, brachyury homolog (mouse)
F12	Hs.644653	NM_003199	TCF4	Transcription factor 4
G01	Hs.573153	NM_003202	TCF7	Transcription factor 7 (T-cell specific, HMG-box)
G02	Hs.516297	NM_031283	TCF7L1	Transcription factor 7-like 1 (T-cell specific, HMG-box)
G03	Hs.593995	NM_030756	TCF7L2	Transcription factor 7-like 2 (T-cell specific, HMG-box)
G04	Hs.592317	NM_003239	TGFB3	Transforming growth factor, beta 3
G05	Hs.197320	NM_005077	TLE1	Transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
G06	Hs.66744	NM_000474	TWIST1	Twist homolog 1 (Drosophila)
G07	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G08	Hs.492974	NM_003882	WISP1	WNT1 inducible signaling pathway protein 1
G09	Hs.592145	NM_003881	WISP2	WNT1 inducible signaling pathway protein 2
G10	Hs.336930	NM_033131	WNT3A	Wingless-type MMTV integration site family, member 3A
G11	Hs.696364	NM_003392	WNT5A	Wingless-type MMTV integration site family, member 5A
G12	Hs.149504	NM_003395	WNT9A	Wingless-type MMTV integration site family, member 9A
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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