RT² Profiler PCR Array (Rotor-Gene® Format) Human WNT Signaling Pathway

Cat. no. 330231 PAHS-243ZR

For pathway expression analysis

Format	For use with the following real-time cyclers		
RT ² Profiler PCR Array,	Rotor-Gene Q, other Rotor-Gene cyclers		
Format R			

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 B-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 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	
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	Angiopoietin-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_001343	DKK1		
B10	Hs.533717	NM 003836	DLK1	Dickkopf homolog 1 (Xenopus laevis) Delta-like 1 homolog (Drosophila)	
B11	Hs.591555	NM 020868	DPP10		
B12	Hs.144700	NM 004429	EFNB1	Dipeptidyl-peptidase 10 (non-functional) Ephrin-B1	
C01	Hs.488293	NM_004429	EGFR	•	
C02		NM 001964	EGR1	Epidermal growth factor receptor	
C02	Hs.326035 Hs.644231	_		Early growth response 1	
	Hs.199905	NM_005239 NM_019851	ETS2	V-Ets erythroblastosis virus E26 oncogene homolog 2 (avian)	
C04 C05			FGF20 FGF4	Fibroblast growth factor 20	
	Hs.1755	NM_002007		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)	
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 metallopeptidase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	
E02	Hs.2256	NM_002423	MMP7	Matrix metallopeptidase 7 (matrilysin, uterine)	
E03	Hs.297413	NM_004994	ммР9	Matrix metallopeptidase 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	

Position	UniGene	GenBank	Symbol	Description	
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	Smoothened, 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	Т	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	RPLPO	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 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.

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