RT² Profiler PCR Array (Rotor-Gene® Format)

Rat WNT Signaling Pathway

Cat. no. 330231 PARN-243ZR

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 Rat 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 ß-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	Rn.154810	NM_133401	Abcb1a	ATP-binding cassette, sub-family B (MDR/TAP), member 1A
A02	Rn.91370	NM_013149	Ahr	Aryl hydrocarbon receptor
A03	Rn.119611	NM_199115	Angptl4	Angiopoietin-like 4
A04	Rn.41192	NM_001044249	Antxr1	Anthrax toxin receptor 1
A05	Rn.162212	NM_024355	Axin2	Axin 2
A06	Rn.9722	NM_013414	Bglap	Bone gamma-carboxyglutamate (gla) protein
A07	Rn.54471	NM_022274	Birc5	Baculoviral IAP repeat-containing 5
A08	Rn.10318	NM_012827	Bmp4	Bone morphogenetic protein 4
A09	Rn.21800	NM_001007148	Btrc	Beta-transducin repeat containing
A10	Rn.206369	NM_175595	Cacna2d3	Calcium channel, voltage-dependent, alpha2/delta subunit 3
A11	Rn.22279	NM_171992	Ccnd1	Cyclin D1
A12	Rn.96083	NM_022267	Ccnd2	Cyclin D2
B01	Rn.1120	NM_012924	Cd44	Cd44 molecule
B02	Rn.1303	NM_031334	Cdh1	Cadherin 1
B03	Rn.48717	NM_031550	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
B04	Rn.10818	NM_017358	Cdon	Cdon homolog (mouse)
B05	Rn.202620	NM_013154	Cebpd	CCAAT/enhancer binding protein (C/EBP), delta
B06	Rn.17145	NM_022266	Ctgf	Connective tissue growth factor
B07	Rn.3236	NM_053332	Cubn	Cubilin (intrinsic factor-cobalamin receptor)
B08	Rn.161784	NM_024159	Dab2	Disabled homolog 2 (Drosophila)
B09	Rn.214343	NM_001106350	Dkk1	Dickkopf homolog 1 (Xenopus laevis)
B10	Rn.14547	NM_053744	Dlk1	Delta-like 1 homolog (Drosophila)
B11	Rn.217077	NM_001012205	Dpp10	Dipeptidylpeptidase 10
B12	Rn.44398	NM_017089	Efnb1	Ephrin B1
C01	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
C02	Rn.9096	NM_012551	Egr1	Early growth response 1
C03	Rn.20403	NM_057104	Enpp2	Ectonucleotide pyrophosphatase/phosphodiesterase 2
C04	Rn.164554	NM_001107107	Ets2	V-ets erythroblastosis virus E26 oncogene homolog 2 (avian)
C05	Rn.64492	NM_023961	Fgf20	Fibroblast growth factor 20
C06	Rn.81223	NM_053809	Fgf4	Fibroblast growth factor 4
C07	Rn.98842	NM_022182	Fgf7	Fibroblast growth factor 7
C08	Rn.25174	NM_012952	Fgf9	Fibroblast growth factor 9
C09	Rn.1604	NM_019143	Fn1	Fibronectin 1
C10	Rn.11306	NM_012953	Fosl1	Fos-like antigen 1
C11	Rn.162557	NM_012561	Fst	Follistatin
C12	Rn.127822	XM_001066344	Gdf5	Growth differentiation factor 5
D01	Rn.53970	NM_019139	Gdnf	Glial cell derived neurotrophic factor
D02	Rn.10346	NM_012567	Gja1	Gap junction protein, alpha 1
D03	Rn.3272	NM_013060	Id2	Inhibitor of DNA binding 2
D04	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
D05	Rn.118681	NM_031511	Igf2	Insulin-like growth factor 2
D06	Rn.9873	NM_012589	Il6	Interleukin 6
D07	Rn.10476	NM_012969	Irs1	Insulin receptor substrate 1
D08	Rn.88804	NM_019147	Jag1	Jagged 1
D09	Rn.8954	NM_053394	Klf5	Kruppel-like factor 5
D10	Rn.21926	NM_130429	Lef1	Lymphoid enhancer binding factor 1
D11	Rn.22436	XM_243524	Lrp1	Low density lipoprotein-related protein 1 (alpha-2-macroglobulin receptor)
D12	Rn.10617	NM_031517	Met	Met proto-oncogene
E01	Rn.6422	NM_031054	Mmp2	Matrix metallopeptidase 2
E02	Rn.10282	NM_012864	Mmp7	Matrix metallopeptidase 7
E03	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
E04	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
E05	Rn.124668	NM_001100781	Nanog	Nanog homeobox
E06	Rn.10691	NM_013150	Nrcam	Neuronal cell adhesion molecule
E07	Rn.10815	NM_145098	Nrp1	Neuropilin 1
E08	Rn.11246	NM_012731	Ntrk2	Neurotrophic tyrosine kinase, receptor, type 2
E09	Rn.55127	NM_012802	Pdgfra	Platelet derived growth factor receptor, alpha polypeptide

Position	UniGene	GenBank	Symbol	Description
E10	Rn.17591	NM_019334	Pitx2	Paired-like homeodomain 2
E11	Rn.82711	NM_017350	Plaur	Plasminogen activator, urokinase receptor
E12	Rn.161748	NM_001009178	Pou5f1	POU class 5 homeobox 1
F01	Rn.12038	NM_138905	Ppap2b	Phosphatidic acid phosphatase type 2B
F02	Rn.96181	NM_013141	Ppard	Peroxisome proliferator-activated receptor delta
F03	Rn.105585	NM_053566	Ptch1	Patched homolog 1 (Drosophila)
F04	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F05	Rn.214214	NM_053470	Runx2	Runt-related transcription factor 2
F06	Rn.102416	NM_001100700	Sfrp2	Secreted frizzled-related protein 2
F07	Rn.23396	NM_053759	Six1	SIX homeobox 1
F08	Rn.44429	NM_012807	Smo	Smoothened homolog (Drosophila)
F09	Rn.219221	NM_001109181	Sox2	SRY (sex determining region Y)-box 2
F10	Rn.95086	XM_343981	Sox9	SRY-box containing gene 9
F11	Rn.218650	NM_001106209	T	T, brachyury homolog (mouse)
F12	Rn.33103	NM_001107865	Tcf3	Transcription factor 3
G01	Rn.23354	NM_053369	Tcf4	Transcription factor 4
G02	Rn.106335	XM_343891	Tcf7	Transcription factor 7, T-cell specific
G03	Rn.105849	XM_001054844	Tcf7l2	Transcription factor 7-like 2 (T-cell specific, HMG-box)
G04	Rn.7018	NM_013174	Tgfb3	Transforming growth factor, beta 3
G05	Rn.6875	XM_342851	Tle1	Transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
G06	Rn.161904	NM_053530	Twist1	Twist homolog 1 (Drosophila)
G07	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G08	Rn.63486	NM_031716	Wisp1	WNT1 inducible signaling pathway protein 1
G09	Rn.53991	NM_031590	Wisp2	WNT1 inducible signaling pathway protein 2
G10	Rn.218621	XM_220546	Wnt3a	Wingless-type MMTV integration site family, member 3A
G11	Rn.48749	NM_022631	Wnt5a	Wingless-type MMTV integration site family, member 5A
G12	Rn.40411	NM_001105783	Wnt9a	Wingless-type MMTV integration site family, member 9A
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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.
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.

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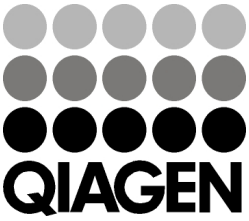

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