RT² Profiler PCR Array (Rotor-Gene® Format)

Human Notch Signaling Targets

Cat. no. 330231 PAHS-259ZR

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 Human Notch Signaling Targets RT² Profiler PCR Array profiles the expression of 84 key genes regulated by the Notch pathway. Notch signaling is a conserved developmental pathway involved in cell-cell communication, cell fate, apoptosis, and development. The pathway was originally discovered in Drosophila melanogaster, and mammalian homologs were identified later. Ligands from the Delta and Jagged/Serrate families activate the Notch membrane-bound receptors, inducing cleavage of the Notch intracellular domain. This intracellular domain interacts with the RBPJ family of transcription factors as well as a variety of coactivators and corepressors to initiate target gene transcription. The output of Notch signaling activation depends on the cellular context, and the proper timing and spatial regulation of its activation is crucial for normal embryonic developmental processes. Dysregulation of Notch signaling processes can lead to cancer as well as genetic developmental disorders. Many Notch pathway target genes have been identified using experimental techniques such as chromatin immunoprecipitation (ChIP) and gene expression studies. This array includes Notch 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 Notch signaling. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes regulated by Notch signaling 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.431048	NM_005157	ABL1	C-abl oncogene 1, non-receptor tyrosine kinase
A02	Hs.643357	NM_006988	ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif, 1
A03	Hs.502182	NM_001709	BDNF	Brain-derived neurotrophic factor
A04	Hs.513811	NM_175931	CBFA2T3	Core-binding factor, runt domain, alpha subunit 2; translocated to, 3
A05	Hs.523852	NM_053056	CCND1	Cyclin D1
A06	Hs.376071	NM_001759	CCND2	Cyclin D2
A07	Hs.436975	NM_004898	CLOCK	Clock homolog (mouse)
A08	Hs.459759	NM_004380	CREBBP	CREB binding protein
A09	Hs.531668	NM_002996	CX3CL1	Chemokine (C-X3-C motif) ligand 1
A10	Hs.522891	NM_000609	CXCL12	Chemokine (C-X-C motif) ligand 12
A11	Hs.590921	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
A12	Hs.40499	NM_012242	DKK1	Dickkopf homolog 1 (Xenopus laevis)
B01	Hs.372152	NM_004416	DTX1	Deltex homolog 1 (Drosophila)
B02	Hs.511899	NM_001955	EDN1	Endothelin 1
B03	Hs.516664	NM_182685	EFNA1	Ephrin-A1
B04	Hs.144700	NM_004429	EFNB1	Ephrin-B1
B05	Hs.534313	NM_004430	EGR3	Early growth response 3
B06	Hs.26770	NM_001446	FABP7	Fatty acid binding protein 7, brain
B07	Hs.39384	NM_014344	FJX1	Four jointed box 1 (Drosophila)
B08	Hs.654360	NM_002019	FLT1	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
B09	Hs.348883	NM_001453	FOXC1	Forkhead box C1
B10	Hs.546573	NM_012183	FOXD3	Forkhead box D3
B11	Hs.155591	NM_001451	FOXF1	Forkhead box F1
B12	Hs.128453	NM_001463	FRZB	Frizzled-related protein
C01	Hs.17631	NM_003468	FZD5	Frizzled family receptor 5
C02	Hs.110571	NM_015675	GADD45B	Growth arrest and DNA-damage-inducible, beta
C03	Hs.584901	NM_013296	GPSM2	G-protein signaling modulator 2
C04	Hs.799	NM_001945	HBEGF	Heparin-binding EGF-like growth factor
C05	Hs.250666	NM_005524	HES1	Hairy and enhancer of split 1, (Drosophila)
C06	Hs.57971	NM_001010926	HES5	Hairy and enhancer of split 5 (Drosophila)
C07	Hs.434828	NM_032580	HES7	Hairy and enhancer of split 7 (Drosophila)
C08	Hs.234434	NM_012258	HEY1	Hairy/enhancer-of-split related with YRPW motif 1
C09	Hs.144287	NM_012259	HEY2	Hairy/enhancer-of-split related with YRPW motif 2
C10	Hs.472566	NM_014571	HEYL	Hairy/enhancer-of-split related with YRPW motif-like
C11	Hs.400095	NM_014365	HSPB8	Heat shock 22kDa protein 8
C12	Hs.504609	NM_002165	ID1	Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
D01	Hs.180919	NM_002166	ID2	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein
D02	Hs.76884	NM_002167	ID3	Inhibitor of DNA binding 3, dominant negative helix-loop-helix protein
D03	Hs.519601	NM_001546	ID4	Inhibitor of DNA binding 4, dominant negative helix-loop-helix protein
D04	Hs.450230	NM_000598	IGFBP3	Insulin-like growth factor binding protein 3
D05	Hs.348390	NM_033439	IL33	Interleukin 33
D06	Hs.728907	NM_000214	JAG1	Jagged 1
D07	Hs.714791	NM_002228	JUN	Jun proto-oncogene
D08	Hs.8004	NM_003947	KALRN	Kalirin, RhoGEF kinase
D09	Hs.1048	NM_003994	KITLG	KIT ligand
D10	Hs.654380	NM_000526	KRT14	Keratin 14
D11	Hs.159142	NM_001040167	LFNG	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
D12	Hs.497806	NM_018650	MARK1	MAP/microtubule affinity-regulating kinase 1
E01	Hs.442619	NM_005098	MSC	Musculin
E02	Hs.178023	NM_005593	MYF5	Myogenic factor 5
E03	Hs.489615	NM_005746	NAMPT	Nicotinamide phosphoribosyltransferase
E04	Hs.527971	NM_006617	NES	Nestin
E05	Hs.370414	NM_018055	NODAL	Nodal homolog (mouse)
E06	Hs.495473	NM_017617	NOTCH1	Notch 1
E07	Hs.8546	NM_000435	NOTCH3	Notch 3
E08	Hs.535075	NM_001004354	NRARP	Notch-regulated ankyrin repeat protein

Position	UniGene	GenBank	Symbol	Description
E09	Hs.270303	NM_000280	PAX6	Paired box 6
E10	Hs.557097	NM_002585	PBX1	Pre-B-cell leukemia homeobox 1
E11	Hs.19492	NM_002590	PCDH8	Protocadherin 8
E12	Hs.1976	NM_002608	PDGFB	Platelet-derived growth factor beta polypeptide
F01	Hs.74615	NM_006206	PDGFRA	Platelet-derived growth factor receptor, alpha polypeptide
F02	Hs.509067	NM_002609	PDGFRB	Platelet-derived growth factor receptor, beta polypeptide
F03	Hs.169002	NM_138296	PTCRA	Pre T-cell antigen receptor alpha
F04	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F05	Hs.479396	NM_005349	RBPJ	Recombination signal binding protein for immunoglobulin kappa J region
F06	Hs.248217	NM_014276	RBPJL	Recombination signal binding protein for immunoglobulin kappa J region-like
F07	Hs.447901	NM_133639	RHOV	Ras homolog gene family, member V
F08	Hs.124940	NM_014470	RND1	Rho family GTPase 1
F09	Hs.149261	NM_001754	RUNX1	Runt-related transcription factor 1
F10	Hs.535845	NM_004348	RUNX2	Runt-related transcription factor 2
F11	Hs.585118	NM_005226	S1PR3	Sphingosine-1-phosphate receptor 3
F12	Hs.499984	NM_003901	SGPL1	Sphingosine-1-phosphate lyase 1
G01	Hs.48029	NM_005985	SNAI1	Snail homolog 1 (Drosophila)
G02	Hs.445498	NM_012245	SNW1	SNW domain containing 1
G03	Hs.527973	NM_003955	SOCS3	Suppressor of cytokine signaling 3
G04	Hs.647409	NM_000346	SOX9	SRY (sex determining region Y)-box 9
G05	Hs.437	NM_004609	TCF15	Transcription factor 15 (basic helix-loop-helix)
G06	Hs.479670	NM_003215	TEC	Tec protein tyrosine kinase
G07	Hs.143250	NM_002160	TNC	Tenascin C
G08	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G09	Hs.492974	NM_003882	WISP1	WNT1 inducible signaling pathway protein 1
G10	Hs.25766	NM_030761	WNT4	Wingless-type MMTV integration site family, member 4
G11	Hs.696364	NM_003392	WNT5A	Wingless-type MMTV integration site family, member 5A
G12	Hs.29764	NM_006522	WNT6	Wingless-type MMTV integration site family, member 6
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.
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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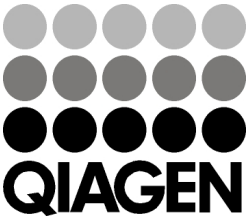

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