

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

Human Notch Signaling Pathway Plus

Cat. no. 330231 PAHS-059YA

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 Notch Signaling Pathway Plus RT² Profiler PCR Array profiles the expression of 84 genes involved in Notch signaling. It also determines whether Notch pathway activity is activated, repressed, or unchanged in experimental samples. This array contains the Notch pathway's binding and receptor processing genes. The putative Notch target genes are also represented. These include genes related to apoptosis, the cell cycle, neurogenesis, and the regulation of transcription as well as genes involved in cell regulation, proliferation, and differentiation. Genes from other signaling pathways that cross-talk with the Notch signaling pathway are represented including members of the Sonic Hedgehog and Wnt signaling pathways. The array also includes 16 experimentally derived Signature Biomarker Genes which, along with classification algorithms, are used to generate the activity score. A set of controls present on each array enables data analysis using the $\Delta\Delta$ CT method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably determine Notch signaling pathway activity and analyze expression of a focused panel of genes related to Notch signaling 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	ADAM10	ADAM17	AES	AXIN1	CBL	CCND1	CCNE1	CD44	CDKN1A	CFLAR	CHUK	CTNNB1
B	DLL1	DLL3	DLL4	EP300	ERBB2	FIGF	FOS	FOSL1	FZD7	GLI1	GSK3B	HDAC1
C	HES1	HEY1	HOXB4	HR	ID1	IFNG	IL2RA	JAG1	JAG2	KRT1	LFNG	LMO2
D	LOR	LRP5	MAML1	MAML2	MFNG	MMP7	NCOR2	NCSTN	NFKB1	NFKB2	NOTCH1	NOTCH2
E	NOTCH3	NOTCH4	NUMB	PAX5	POFUT1	PPARG	PSEN1	PSEN2	PSENN1	PTCRA	RBPJL	RFNG
F	RUNX1	SEL1L	SHH	SMO	SNW1	STAT6	TLE1	WISP1	ADA	AFAP1L2	DTX1	H19
G	Hes4	HES5	HEY2	HEYL	NRARP	SCGB1A1	SERPINA3	SLC6A12	SNAI2	TFF1	TNFSF10	UBD
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.172028	NM_001110	ADAM10	ADAM metalloproteinase domain 10
A02	Hs.404914	NM_003183	ADAM17	ADAM metalloproteinase domain 17
A03	Hs.515053	NM_001130	AES	Amino-terminal enhancer of split
A04	Hs.592082	NM_003502	AXIN1	Axin 1
A05	Hs.504096	NM_005188	CBL	Cas-Br-M (murine) ecotropic retroviral transforming sequence
A06	Hs.523852	NM_053056	CCND1	Cyclin D1
A07	Hs.244723	NM_001238	CCNE1	Cyclin E1
A08	Hs.502328	NM_000610	CD44	CD44 molecule (Indian blood group)
A09	Hs.732576	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
A10	Hs.731912	NM_003879	CFLAR	CASP8 and FADD-like apoptosis regulator
A11	Hs.198998	NM_001278	CHUK	Conserved helix-loop-helix ubiquitous kinase
A12	Hs.476018	NM_001904	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B01	Hs.379912	NM_005618	DLL1	Delta-like 1 (Drosophila)
B02	Hs.127792	NM_016941	DLL3	Delta-like 3 (Drosophila)
B03	Hs.511076	NM_019074	DLL4	Delta-like 4 (Drosophila)
B04	Hs.655211	NM_001429	EP300	E1A binding protein p300
B05	Hs.446352	NM_004448	ERBB2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B06	Hs.11392	NM_004469	FIGF	C-fos induced growth factor (vascular endothelial growth factor D)
B07	Hs.25647	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
B08	Hs.283565	NM_005438	FOSL1	FOS-like antigen 1
B09	Hs.173859	NM_003507	FZD7	Frizzled family receptor 7
B10	Hs.632702	NM_005269	GLI1	GLI family zinc finger 1
B11	Hs.445733	NM_002093	GSK3B	Glycogen synthase kinase 3 beta
B12	Hs.88556	NM_004964	HDAC1	Histone deacetylase 1
C01	Hs.250666	NM_005524	HES1	Hairy and enhancer of split 1, (Drosophila)
C02	Hs.234434	NM_012258	HEY1	Hairy/enhancer-of-split related with YRPW motif 1
C03	Hs.664706	NM_024015	HOXB4	Homeobox B4
C04	Hs.272367	NM_018411	HR	Hairless homolog (mouse)
C05	Hs.504609	NM_002165	ID1	Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
C06	Hs.856	NM_000619	IFNG	Interferon, gamma
C07	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
C08	Hs.626544	NM_000214	JAG1	Jagged 1
C09	Hs.433445	NM_002226	JAG2	Jagged 2
C10	Hs.80828	NM_006121	KRT1	Keratin 1
C11	Hs.159142	NM_001040167	LFNG	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
C12	Hs.34560	NM_005574	LMO2	LIM domain only 2 (rhombotin-like 1)
D01	Hs.251680	NM_000427	LOR	Loricrin
D02	Hs.6347	NM_002335	LRP5	Low density lipoprotein receptor-related protein 5
D03	Hs.631951	NM_014757	MAML1	Mastermind-like 1 (Drosophila)
D04	Hs.745167	NM_032427	MAML2	Mastermind-like 2 (Drosophila)
D05	Hs.517603	NM_002405	MFNG	MFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
D06	Hs.2256	NM_002423	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
D07	Hs.137510	NM_006312	NCOR2	Nuclear receptor corepressor 2
D08	Hs.517249	NM_015331	NCSTN	Nicastrin

Position	UniGene	GenBank	Symbol	Description
D09	Hs.618430	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
D10	Hs.73090	NM_002502	NFKB2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)
D11	Hs.495473	NM_017617	NOTCH1	Notch 1
D12	Hs.487360	NM_024408	NOTCH2	Notch 2
E01	Hs.8546	NM_000435	NOTCH3	Notch 3
E02	Hs.436100	NM_004557	NOTCH4	Notch 4
E03	Hs.525443	NM_003744	NUMB	Numb homolog (Drosophila)
E04	Hs.654464	NM_016734	PAX5	Paired box 5
E05	Hs.472409	NM_172236	POFUT1	Protein O-fucosyltransferase 1
E06	Hs.162646	NM_015869	PPARG	Peroxisome proliferator-activated receptor gamma
E07	Hs.3260	NM_000021	PSEN1	Presenilin 1
E08	Hs.25363	NM_000447	PSEN2	Presenilin 2 (Alzheimer disease 4)
E09	Hs.534465	NM_172341	PSENEN	Presenilin enhancer 2 homolog (C. elegans)
E10	Hs.169002	NM_138296	PTCRA	Pre T-cell antigen receptor alpha
E11	Hs.278489	NM_014276	RBPJL	Recombination signal binding protein for immunoglobulin kappa J region-like
E12	Hs.569700	NM_002917	RFNG	RFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
F01	Hs.612648	NM_001754	RUNX1	Runt-related transcription factor 1
F02	Hs.181300	NM_005065	SEL1L	Sel-1 suppressor of lin-12-like (C. elegans)
F03	Hs.164537	NM_000193	SHH	Sonic hedgehog
F04	Hs.437846	NM_005631	SMO	Smoothed, frizzled family receptor
F05	Hs.445498	NM_012245	SNW1	SNW domain containing 1
F06	Hs.524518	NM_003153	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
F07	Hs.689805	NM_005077	TLE1	Transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
F08	Hs.492974	NM_003882	WISP1	WNT1 inducible signaling pathway protein 1
F09	Hs.654536	NM_000022	ADA	Adenosine deaminase
F10	Hs.501106	NM_032550	AFAP1L2	Actin filament associated protein 1-like 2
F11	Hs.372152	NM_004416	DTX1	Deltex homolog 1 (Drosophila)
F12	Hs.533566	NR_002196	H19	H19, imprinted maternally expressed transcript (non-protein coding)
G01	Hs.154029	NM_021170	Hes4	Hairy and enhancer of split 4 (Drosophila)
G02	Hs.57971	NM_001010926	HES5	Hairy and enhancer of split 5 (Drosophila)
G03	Hs.144287	NM_012259	HEY2	Hairy/enhancer-of-split related with YRPW motif 2
G04	Hs.472566	NM_014571	HEYL	Hairy/enhancer-of-split related with YRPW motif-like
G05	Hs.732282	NM_001004354	NRARP	Notch-regulated ankyrin repeat protein
G06	Hs.523732	NM_003357	SCGB1A1	Secretoglobin, family 1A, member 1 (uteroglobin)
G07	Hs.710488	NM_001085	SERPINA3	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3
G08	Hs.737267	NM_003044	SLC6A12	Solute carrier family 6 (neurotransmitter transporter, betaine/GABA), member 12
G09	Hs.360174	NM_003068	SNAI2	Snail homolog 2 (Drosophila)
G10	Hs.162807	NM_003225	TFF1	Trefoil factor 1
G11	Hs.478275	NM_003810	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G12	Hs.44532	NM_006398	UBD	Ubiquitin D
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.544577	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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