

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Notch Signaling Pathway

Cat. no. 330231 PAMM-059ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems <sup>®</sup> models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad <sup>®</sup> models iCycler <sup>®</sup> , iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf <sup>®</sup> Mastercycler <sup>®</sup> ep realplex models 2, 2s, 4, 4s; Stratagene <sup>®</sup> models Mx3005P <sup>®</sup> , Mx3000P <sup>®</sup> ; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon <sup>®</sup> , DNA Engine Opticon 2; Stratagene Mx4000 <sup>®</sup>
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche <sup>®</sup> LightCycler <sup>®</sup> 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm <sup>®</sup> BioMark™



## Description

The Mouse Notch Signaling Pathway RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes involved in Notch signaling. 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 Receptor Signaling Pathways. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to Notch signaling with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> 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. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at  $-20^{\circ}\text{C}$ .

**Note:** Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

**Note:** Open the package and store the products appropriately immediately on receipt.

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Adam10	Adam17	Aes	Axin1	Cbl	Ccnd1	Ccne1	Cd44	Cdkn1a	Cflar	Chuk	Ctnnb1
<b>B</b>	Dll1	Dll3	Dll4	Dtx1	Ep300	Erb2	Figf	Fos	Fosl1	Fzd2	Fzd3	Fzd4
<b>C</b>	Fzd5	Fzd7	Gli1	Gsk3b	Hes1	Hes5	Hey1	Hey2	Heyl	Hoxb4	hr	Id1
<b>D</b>	Ifng	Il17b	Il2ra	Il6st	Jag1	Jag2	Krt1	Lfng	Lmo2	Lor	Lrp5	Mam1
<b>E</b>	Mam1	Mfng	Mmp7	Ncor2	Ncstn	Neur1a	Nfkb1	Nfkb2	Notch1	Notch2	Notch3	Notch4
<b>F</b>	Nr4a2	Numb	Pax5	Pofut1	Pparg	Psen1	Psen2	Psenen	Ptcr	Rbpil	Rfng	Runx1
<b>G</b>	Sei1	Shh	Smo	Snw1	Stat6	Stil	Sufu	Supt6h	Tle1	Wisp1	Wnt11	Zic2
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.3037	NM_007399	Adam10	A disintegrin and metallopeptidase domain 10
A02	Mm.27681	NM_009615	Adam17	A disintegrin and metallopeptidase domain 17
A03	Mm.180013	NM_010347	Aes	Amino-terminal enhancer of split
A04	Mm.23684	NM_009733	Axin1	Axin 1
A05	Mm.266871	NM_007619	Cbl	Casitas B-lineage lymphoma
A06	Mm.273049	NM_007631	Ccnd1	Cyclin D1
A07	Mm.16110	NM_007633	Ccne1	Cyclin E1
A08	Mm.423621	NM_009851	Cd44	CD44 antigen
A09	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
A10	Mm.336848	NM_009805	Cflar	CASP8 and FADD-like apoptosis regulator
A11	Mm.3996	NM_007700	Chuk	Conserved helix-loop-helix ubiquitous kinase
A12	Mm.291928	NM_007614	Ctnnb1	Catenin (cadherin associated protein), beta 1
B01	Mm.4875	NM_007865	Dll1	Delta-like 1 (Drosophila)
B02	Mm.12896	NM_007866	Dll3	Delta-like 3 (Drosophila)
B03	Mm.143719	NM_019454	Dll4	Delta-like 4 (Drosophila)
B04	Mm.1645	NM_008052	Dtx1	Deltex 1 homolog (Drosophila)
B05	Mm.258397	NM_177821	Ep300	E1A binding protein p300
B06	Mm.290822	NM_001003817	Erb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
B07	Mm.297978	NM_010216	Figf	C-fos induced growth factor
B08	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
B09	Mm.6215	NM_010235	Fosl1	Fos-like antigen 1
B10	Mm.36416	NM_020510	Fzd2	Frizzled homolog 2 (Drosophila)
B11	Mm.214687	NM_021458	Fzd3	Frizzled homolog 3 (Drosophila)
B12	Mm.86755	NM_008055	Fzd4	Frizzled homolog 4 (Drosophila)
C01	Mm.150813	NM_022721	Fzd5	Frizzled homolog 5 (Drosophila)
C02	Mm.297906	NM_008057	Fzd7	Frizzled homolog 7 (Drosophila)
C03	Mm.391450	NM_010296	Gli1	GLI-Kruppel family member GLI1
C04	Mm.394930	NM_019827	Gsk3b	Glycogen synthase kinase 3 beta
C05	Mm.390859	NM_008235	Hes1	Hairy and enhancer of split 1 (Drosophila)
C06	Mm.137268	NM_010419	Hes5	Hairy and enhancer of split 5 (Drosophila)
C07	Mm.29581	NM_010423	Hey1	Hairy/enhancer-of-split related with YRPW motif 1
C08	Mm.103573	NM_013904	Hey2	Hairy/enhancer-of-split related with YRPW motif 2
C09	Mm.103615	NM_013905	Heyl	Hairy/enhancer-of-split related with YRPW motif-like
C10	Mm.3546	NM_010459	Hoxb4	Homeobox B4
C11	Mm.7598	NM_021877	hr	Hairless
C12	Mm.444	NM_010495	Id1	Inhibitor of DNA binding 1
D01	Mm.240327	NM_008337	Ifng	Interferon gamma
D02	Mm.59313	NM_019508	Il17b	Interleukin 17B
D03	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
D04	Mm.4364	NM_010560	Il6st	Interleukin 6 signal transducer
D05	Mm.22398	NM_013822	Jag1	Jagged 1
D06	Mm.186146	NM_010588	Jag2	Jagged 2
D07	Mm.183137	NM_008473	Krt1	Keratin 1
D08	Mm.12834	NM_008494	Lfng	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase

Position	UniGene	GenBank	Symbol	Description
D09	Mm.29266	NM_008505	Lmo2	LIM domain only 2
D10	Mm.1121	NM_008508	Lor	Loricrin
D11	Mm.274581	NM_008513	Lrp5	Low density lipoprotein receptor-related protein 5
D12	Mm.51116	NM_175334	Mam1	Mastermind like 1 (Drosophila)
E01	Mm.116898	NM_001013813	Mam2	Mastermind like 2 (Drosophila)
E02	Mm.149235	NM_008595	Mfng	MFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
E03	Mm.4825	NM_010810	Mmp7	Matrix metalloproteinase 7
E04	Mm.278646	NM_011424	Ncor2	Nuclear receptor co-repressor 2
E05	Mm.218203	NM_021607	Ncstn	Nicastrin
E06	Mm.313651	NM_021360	Neur1a	Neutralized homolog 1A (Drosophila)
E07	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
E08	Mm.102365	NM_019408	Nfkb2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p49/p100
E09	Mm.290610	NM_008714	Notch1	Notch gene homolog 1 (Drosophila)
E10	Mm.254017	NM_010928	Notch2	Notch gene homolog 2 (Drosophila)
E11	Mm.439741	NM_008716	Notch3	Notch gene homolog 3 (Drosophila)
E12	Mm.173813	NM_010929	Notch4	Notch gene homolog 4 (Drosophila)
F01	Mm.3507	NM_013613	Nr4a2	Nuclear receptor subfamily 4, group A, member 2
F02	Mm.4390	NM_010949	Numb	Numb gene homolog (Drosophila)
F03	Mm.439659	NM_008782	Pax5	Paired box gene 5
F04	Mm.293761	NM_080463	Pofut1	Protein O-fucosyltransferase 1
F05	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
F06	Mm.998	NM_008943	Psen1	Presenilin 1
F07	Mm.330850	NM_011183	Psen2	Presenilin 2
F08	Mm.86557	NM_025498	Psenen	Presenilin enhancer 2 homolog (C. elegans)
F09	Mm.215173	NM_011195	Ptcra	Pre T-cell antigen receptor alpha
F10	Mm.473794	NM_009036	Rbpjl	Recombination signal binding protein for immunoglobulin kappa J region-like
F11	Mm.871	NM_009053	Rfng	RFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
F12	Mm.4081	NM_009821	Runx1	Runt related transcription factor 1
G01	Mm.250605	NM_001039089	Sel1l	Sel-1 suppressor of lin-12-like (C. elegans)
G02	Mm.57202	NM_009170	Shh	Sonic hedgehog
G03	Mm.29279	NM_176996	Smo	Smoothed homolog (Drosophila)
G04	Mm.271174	NM_025507	Snw1	SNW domain containing 1
G05	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
G06	Mm.3988	NM_009185	Stil	Scf/Tal1 interrupting locus
G07	Mm.41210	NM_015752	Sufu	Suppressor of fused homolog (Drosophila)
G08	Mm.20755	NM_009297	Supt6h	Suppressor of Ty 6 homolog (S. cerevisiae)
G09	Mm.278444	NM_011599	Tle1	Transducin-like enhancer of split 1, homolog of Drosophila E(spl)
G10	Mm.10222	NM_018865	Wisp1	WNT1 inducible signaling pathway protein 1
G11	Mm.22182	NM_009519	Wnt11	Wingless-related MMTV integration site 11
G12	Mm.308936	NM_009574	Zic2	Zinc finger protein of the cerebellum 2
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> 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 <sup>2</sup> 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 <sup>2</sup> 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.

RT<sup>2</sup> 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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