

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

Human Hedgehog Signaling Pathway

Cat. no. 330231 PAHS-078ZA

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 Hedgehog Signaling RT² Profiler PCR Array profiles the expression of 84 key genes involved in the hedgehog signaling pathway. The hedgehog family members, including Sonic hedgehog (Shh), are the most well-known morphogens involved in the developmental pattern formation of various organs, such as the nervous system, muscle, the heart and the lungs. Hedgehog signaling has also been implicated in the development of several human cancers. The array includes hedgehog family members, hedgehog receptors, and other associated proteins. The array also includes key genes involved in cell differentiation and multi-cellular organism development. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to hedgehog 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	BCL2	BMP2	BMP4	BMP5	BMP6	BMP7	BMP8B	BOC	BTRC	CDON	CSNK1A1	CSNK1E
B	CTNNB1	DHH	DISP1	DISP2	ERBB4	FAT4	FBXW11	FGF9	FGFR3	FKBP8	FOXE1	FRMD6
C	GAS1	GLI1	GLI2	GLI3	GREM1	GSK3B	HHAT	HHIP	IFT52	IHH	KCTD11	LATS1
D	LATS2	LRP2	MAPK1	MOBK1A	MTSS1	NF2	NPC1	NUMB	OTX2	PRKACA	PRKACB	PTCH1
E	PTCH2	PTCHD1	PTCHD2	PTCHD3	RAB23	RUNX2	SFRP1	SHH	SMO	STK3	STK36	SUFU
F	TP53	VEGFA	WIF1	WNT1	WNT10A	WNT10B	WNT11	WNT16	WNT2	WNT2B	WNT3	WNT3A
G	WNT4	WNT5A	WNT5B	WNT6	WNT7A	WNT7B	WNT8A	WNT8B	WNT9A	WNT9B	ZIC1	ZIC2
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.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A02	Hs.73853	NM_001200	BMP2	Bone morphogenetic protein 2
A03	Hs.68879	NM_130851	BMP4	Bone morphogenetic protein 4
A04	Hs.296648	NM_021073	BMP5	Bone morphogenetic protein 5
A05	Hs.285671	NM_001718	BMP6	Bone morphogenetic protein 6
A06	Hs.473163	NM_001719	BMP7	Bone morphogenetic protein 7
A07	Hs.664022	NM_001720	BMP8B	Bone morphogenetic protein 8b
A08	Hs.591318	NM_033254	BOC	Boc homolog (mouse)
A09	Hs.643802	NM_033637	BTRC	Beta-transducin repeat containing
A10	Hs.38034	NM_016952	CDON	Cdon homolog (mouse)
A11	Hs.529862	NM_001892	CSNK1A1	Casein kinase 1, alpha 1
A12	Hs.474833	NM_001894	CSNK1E	Casein kinase 1, epsilon
B01	Hs.476018	NM_001904	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B02	Hs.524382	NM_021044	DHH	Desert hedgehog
B03	Hs.528817	NM_032890	DISP1	Dispatched homolog 1 (Drosophila)
B04	Hs.355645	NM_033510	DISP2	Dispatched homolog 2 (Drosophila)
B05	Hs.390729	NM_005235	ERBB4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
B06	Hs.702217	NM_024582	FAT4	FAT tumor suppressor homolog 4 (Drosophila)
B07	Hs.484138	NM_012300	FBXW11	F-box and WD repeat domain containing 11
B08	Hs.111	NM_002010	FGF9	Fibroblast growth factor 9 (glia-activating factor)
B09	Hs.1420	NM_000142	FGFR3	Fibroblast growth factor receptor 3
B10	Hs.173464	NM_012181	FKBP8	FK506 binding protein 8, 38kDa
B11	Hs.159234	NM_004473	FOXE1	Forkhead box E1 (thyroid transcription factor 2)
B12	Hs.434914	NM_152330	FRMD6	FERM domain containing 6
C01	Hs.65029	NM_002048	GAS1	Growth arrest-specific 1
C02	Hs.632702	NM_005269	GLI1	GLI family zinc finger 1
C03	Hs.111867	NM_005270	GLI2	GLI family zinc finger 2
C04	Hs.21509	NM_000168	GLI3	GLI family zinc finger 3
C05	Hs.40098	NM_013372	GREM1	Gremlin 1
C06	Hs.445733	NM_002093	GSK3B	Glycogen synthase kinase 3 beta
C07	Hs.58650	NM_018194	HHAT	Hedgehog acyltransferase
C08	Hs.507991	NM_022475	HHIP	Hedgehog interacting protein
C09	Hs.444332	NM_016004	IFT52	Intraflagellar transport 52 homolog (Chlamydomonas)
C10	Hs.654504	NM_002181	IHH	Indian hedgehog
C11	Hs.592112	NM_001002914	KCTD11	Potassium channel tetramerisation domain containing 11
C12	Hs.716697	NM_004690	LATS1	LATS, large tumor suppressor, homolog 1 (Drosophila)
D01	Hs.78960	NM_014572	LATS2	LATS, large tumor suppressor, homolog 2 (Drosophila)
D02	Hs.657729	NM_004525	LRP2	Low density lipoprotein receptor-related protein 2
D03	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
D04	Hs.730274	NM_173468	MOBK1A	MOB1, Mps One Binder kinase activator-like 1A (yeast)
D05	Hs.700429	NM_014751	MTSS1	Metastasis suppressor 1
D06	Hs.187898	NM_000268	NF2	Neurofibromin 2 (merlin)
D07	Hs.464779	NM_000271	NPC1	Niemann-Pick disease, type C1
D08	Hs.654609	NM_003744	NUMB	Numb homolog (Drosophila)
D09	Hs.288655	NM_021728	OTX2	Orthodenticle homeobox 2

Position	UniGene	GenBank	Symbol	Description
D10	Hs.631630	NM_002730	PRKACA	Protein kinase, cAMP-dependent, catalytic, alpha
D11	Hs.487325	NM_182948	PRKACB	Protein kinase, cAMP-dependent, catalytic, beta
D12	Hs.494538	NM_000264	PTCH1	Patched 1
E01	Hs.591497	NM_003738	PTCH2	Patched 2
E02	Hs.319503	NM_173495	PTCHD1	Patched domain containing 1
E03	Hs.202355	NM_020780	PTCHD2	Patched domain containing 2
E04	Hs.631832	NM_001034842	PTCHD3	Patched domain containing 3
E05	Hs.555016	NM_183227	RAB23	RAB23, member RAS oncogene family
E06	Hs.535845	NM_004348	RUNX2	Runt-related transcription factor 2
E07	Hs.713546	NM_003012	SFRP1	Secreted frizzled-related protein 1
E08	Hs.164537	NM_000193	SHH	Sonic hedgehog
E09	Hs.437846	NM_005631	SMO	Smoothened, frizzled family receptor
E10	Hs.492333	NM_006281	STK3	Serine/threonine kinase 3
E11	Hs.471404	NM_015690	STK36	Serine/threonine kinase 36
E12	Hs.404089	NM_016169	SUFU	Suppressor of fused homolog (Drosophila)
F01	Hs.654481	NM_000546	TP53	Tumor protein p53
F02	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
F03	Hs.284122	NM_007191	WIF1	WNT inhibitory factor 1
F04	Hs.248164	NM_005430	WNT1	Wingless-type MMTV integration site family, member 1
F05	Hs.121540	NM_025216	WNT10A	Wingless-type MMTV integration site family, member 10A
F06	Hs.91985	NM_003394	WNT10B	Wingless-type MMTV integration site family, member 10B
F07	Hs.108219	NM_004626	WNT11	Wingless-type MMTV integration site family, member 11
F08	Hs.272375	NM_057168	WNT16	Wingless-type MMTV integration site family, member 16
F09	Hs.567356	NM_003391	WNT2	Wingless-type MMTV integration site family member 2
F10	Hs.258575	NM_004185	WNT2B	Wingless-type MMTV integration site family, member 2B
F11	Hs.445884	NM_030753	WNT3	Wingless-type MMTV integration site family, member 3
F12	Hs.336930	NM_033131	WNT3A	Wingless-type MMTV integration site family, member 3A
G01	Hs.25766	NM_030761	WNT4	Wingless-type MMTV integration site family, member 4
G02	Hs.696364	NM_003392	WNT5A	Wingless-type MMTV integration site family, member 5A
G03	Hs.306051	NM_032642	WNT5B	Wingless-type MMTV integration site family, member 5B
G04	Hs.29764	NM_006522	WNT6	Wingless-type MMTV integration site family, member 6
G05	Hs.72290	NM_004625	WNT7A	Wingless-type MMTV integration site family, member 7A
G06	Hs.512714	NM_058238	WNT7B	Wingless-type MMTV integration site family, member 7B
G07	Hs.591274	NM_058244	WNT8A	Wingless-type MMTV integration site family, member 8A
G08	Hs.421281	NM_003393	WNT8B	Wingless-type MMTV integration site family, member 8B
G09	Hs.149504	NM_003395	WNT9A	Wingless-type MMTV integration site family, member 9A
G10	Hs.326420	NM_003396	WNT9B	Wingless-type MMTV integration site family, member 9B
G11	Hs.598590	NM_003412	ZIC1	Zic family member 1
G12	Hs.653700	NM_007129	ZIC2	Zic family member 2
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.
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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