

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

Human Stem Cell

Cat. no. 330231 PAHS-405ZA

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 Stem Cell RT² Profiler PCR Array profiles the expression of 84 genes related to the identification, growth and differentiation of stem cells. Stem-cell specific markers are included as well as stem cell differentiation markers. Genes in signaling pathways important for stem cells maintenance are also contained on this array. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to stem cell biology 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	ABCG2	ACAN	ACTC1	ADAR	ALDH1A1	ALDH2	ALPI	APC	ASCL2	AXIN1	BGLAP	BMP1
B	BMP2	BMP3	BTRC	CCNA2	CCND1	CCND2	CCNE1	CD3D	CD4	CD44	CD8A	CD8B
C	CDC42	CDH1	CDH2	CDK1	COL1A1	COL2A1	COL9A1	CTNNA1	CXCL12	DHH	DLL1	DLL3
D	DTX1	DTX2	DVL1	EP300	FGF1	FGF2	FGF3	FGF4	FGFR1	FOXA2	FRAT1	FZD1
E	GDF2	GDF3	GJA1	GJB1	GJB2	HDAC2	HSPA9	IGF1	ISL1	JAG1	KAT2A	KAT7
F	KAT8	KRT15	MME	MSX1	MYC	MYOD1	NCAM1	NEUROG2	NOTCH1	NOTCH2	NUMB	PARD6A
G	PDX1	PPARD	PPARG	RB1	S100B	SIGMAR1	SOX1	SOX2	T	TERT	TUBB3	WNT1
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.480218	NM_004827	ABCG2	ATP-binding cassette, sub-family G (WHITE), member 2
A02	Hs.2159	NM_001135	ACAN	Aggrecan
A03	Hs.118127	NM_005159	ACTC1	Actin, alpha, cardiac muscle 1
A04	Hs.12341	NM_001111	ADAR	Adenosine deaminase, RNA-specific
A05	Hs.76392	NM_000689	ALDH1A1	Aldehyde dehydrogenase 1 family, member A1
A06	Hs.632733	NM_000690	ALDH2	Aldehyde dehydrogenase 2 family (mitochondrial)
A07	Hs.37009	NM_001631	ALPI	Alkaline phosphatase, intestinal
A08	Hs.158932	NM_000038	APC	Adenomatous polyposis coli
A09	Hs.152475	NM_005170	ASCL2	Achaete-scute complex homolog 2 (Drosophila)
A10	Hs.592082	NM_003502	AXIN1	Axin 1
A11	Hs.654541	NM_199173	BGLAP	Bone gamma-carboxyglutamate (gla) protein
A12	Hs.1274	NM_006129	BMP1	Bone morphogenetic protein 1
B01	Hs.73853	NM_001200	BMP2	Bone morphogenetic protein 2
B02	Hs.387411	NM_001201	BMP3	Bone morphogenetic protein 3
B03	Hs.643802	NM_033637	BTRC	Beta-transducin repeat containing
B04	Hs.58974	NM_001237	CCNA2	Cyclin A2
B05	Hs.523852	NM_053056	CCND1	Cyclin D1
B06	Hs.376071	NM_001759	CCND2	Cyclin D2
B07	Hs.244723	NM_001238	CCNE1	Cyclin E1
B08	Hs.504048	NM_000732	CD3D	CD3d molecule, delta (CD3-TCR complex)
B09	Hs.631659	NM_000616	CD4	CD4 molecule
B10	Hs.502328	NM_000610	CD44	CD44 molecule (Indian blood group)
B11	Hs.85258	NM_001768	CD8A	CD8a molecule
B12	Hs.405667	NM_004931	CD8B	CD8b molecule
C01	Hs.690198	NM_001791	CDC42	Cell division cycle 42 (GTP binding protein, 25kDa)
C02	Hs.461086	NM_004360	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
C03	Hs.464829	NM_001792	CDH2	Cadherin 2, type 1, N-cadherin (neuronal)
C04	Hs.334562	NM_001786	CDK1	Cyclin-dependent kinase 1
C05	Hs.172928	NM_000088	COL1A1	Collagen, type I, alpha 1
C06	Hs.408182	NM_001844	COL2A1	Collagen, type II, alpha 1
C07	Hs.590892	NM_001851	COL9A1	Collagen, type IX, alpha 1
C08	Hs.534797	NM_001903	CTNNA1	Catenin (cadherin-associated protein), alpha 1, 102kDa
C09	Hs.522891	NM_000609	CXCL12	Chemokine (C-X-C motif) ligand 12
C10	Hs.524382	NM_021044	DHH	Desert hedgehog
C11	Hs.379912	NM_005618	DLL1	Delta-like 1 (Drosophila)
C12	Hs.127792	NM_016941	DLL3	Delta-like 3 (Drosophila)
D01	Hs.372152	NM_004416	DTX1	Deltex homolog 1 (Drosophila)
D02	Hs.187058	NM_020892	DTX2	Deltex homolog 2 (Drosophila)
D03	Hs.74375	NM_004421	DVL1	Dishevelled, dsh homolog 1 (Drosophila)
D04	Hs.517517	NM_001429	EP300	E1A binding protein p300
D05	Hs.483635	NM_000800	FGF1	Fibroblast growth factor 1 (acidic)
D06	Hs.284244	NM_002006	FGF2	Fibroblast growth factor 2 (basic)
D07	Hs.37092	NM_005247	FGF3	Fibroblast growth factor 3
D08	Hs.1755	NM_002007	FGF4	Fibroblast growth factor 4
D09	Hs.264887	NM_015850	FGFR1	Fibroblast growth factor receptor 1

Position	UniGene	GenBank	Symbol	Description
D10	Hs.155651	NM_021784	FOXA2	Forkhead box A2
D11	Hs.126057	NM_005479	FRAT1	Frequently rearranged in advanced T-cell lymphomas
D12	Hs.94234	NM_003505	FZD1	Frizzled family receptor 1
E01	Hs.279463	NM_016204	GDF2	Growth differentiation factor 2
E02	Hs.86232	NM_020634	GDF3	Growth differentiation factor 3
E03	Hs.74471	NM_000165	GJA1	Gap junction protein, alpha 1, 43kDa
E04	Hs.333303	NM_000166	GJB1	Gap junction protein, beta 1, 32kDa
E05	Hs.524894	NM_004004	GJB2	Gap junction protein, beta 2, 26kDa
E06	Hs.3352	NM_001527	HDAC2	Histone deacetylase 2
E07	Hs.184233	NM_004134	HSPA9	Heat shock 70kDa protein 9 (mortalin)
E08	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
E09	Hs.505	NM_002202	ISL1	ISL LIM homeobox 1
E10	Hs.728907	NM_000214	JAG1	Jagged 1
E11	Hs.463045	NM_021078	KAT2A	K(lysine) acetyltransferase 2A
E12	Hs.21907	NM_007067	KAT7	K(lysine) acetyltransferase 7
F01	Hs.533803	NM_032188	KAT8	K(lysine) acetyltransferase 8
F02	Hs.654570	NM_002275	KRT15	Keratin 15
F03	Hs.307734	NM_000902	MME	Membrane metallo-endopeptidase
F04	Hs.424414	NM_002448	MSX1	Msh homeobox 1
F05	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
F06	Hs.181768	NM_002478	MYOD1	Myogenic differentiation 1
F07	Hs.503878	NM_000615	NCAM1	Neural cell adhesion molecule 1
F08	Hs.567563	NM_024019	NEUROG2	Neurogenin 2
F09	Hs.495473	NM_017617	NOTCH1	Notch 1
F10	Hs.487360	NM_024408	NOTCH2	Notch 2
F11	Hs.654609	NM_003744	NUMB	Numb homolog (Drosophila)
F12	Hs.112933	NM_016948	PARD6A	Par-6 partitioning defective 6 homolog alpha (C. elegans)
G01	Hs.32938	NM_000209	PDX1	Pancreatic and duodenal homeobox 1
G02	Hs.696032	NM_006238	PPARD	Peroxisome proliferator-activated receptor delta
G03	Hs.162646	NM_015869	PPARG	Peroxisome proliferator-activated receptor gamma
G04	Hs.408528	NM_000321	RB1	Retinoblastoma 1
G05	Hs.422181	NM_006272	S100B	S100 calcium binding protein B
G06	Hs.522087	NM_005866	SIGMAR1	Sigma non-opioid intracellular receptor 1
G07	Hs.202526	NM_005986	SOX1	SRY (sex determining region Y)-box 1
G08	Hs.518438	NM_003106	SOX2	SRY (sex determining region Y)-box 2
G09	Hs.389457	NM_003181	T	T, brachyury homolog (mouse)
G10	Hs.492203	NM_198253	TERT	Telomerase reverse transcriptase
G11	Hs.511743	NM_006086	TUBB3	Tubulin, beta 3
G12	Hs.248164	NM_005430	WNT1	Wingless-type MMTV integration site family, member 1
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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