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

Human Polycomb & Trithorax Complexes

Cat. no. 330231 PAHS-506ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human Polycomb & Trithorax Complexes RT² Profiler PCR Array profiles the expression of 84 key polycomb and trithorax complex components including chromatin modification enzymes and remodeling factors. The polycomb and trithorax complexes maintain epigenetic control of cell type specific gene expression patterns important for cellular identity via histone modification. The polycomb complex causes transcriptional repression, while the trithorax complex reverses that effect to maintain an active state of transcription. Polycomb and trithorax complex activity controls the proper differentiation of induced and embryonic pluripotent stem cells. Dysregulation of their activities promotes oncogenesis by causing inappropriate expression of cell identity, differentiation and proliferation genes. Research into the expression and regulation of these complexes can help determine the underlying mechanisms of histone modification based regulation of gene expression during differentiation and oncogenesis. This array includes core components of the polycomb and trithorax complexes as well as key interactors and genes necessary for complex assembly. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes involved in polycomb and trithorax complex activity 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	AEBP2	ARID1A	ARID1B	ASH2L	ASXL1	ASXL2	ASXL3	BAP1	BMI1	CBX1	CBX2	CBX3
B	CBX4	CBX5	CBX7	CBX8	CTBP2	CXXC1	DNMT1	DNMT3A	DNMT3B	DNMT3L	E2F6	EED
C	EPC1	EPC2	EZH1	EZH2	HLTF	HTT	INO80	INO80B	INO80C	INO80D	JARID2	KDM2B
D	KDM5D	L3MBTL2	LARP7	MBTD1	MLL2	MLL3	MLL4	MLL5	MOV10	MTF2	PBRM1	PCGF1
E	PCGF2	PCGF5	PHC1	PHC2	PHC3	PHF1	PHF19	PPP1CC	PPP1R8	RBBP4	RBBP5	RBBP7
F	RBP2	RING1	RNASEL	RNF2	RYBP	SCMH1	SCML2	SIRT1	SMARCA1	SMARCA2	SMARCA4	SMARCA5
G	SMARCB1	SMARCC1	SMARCC2	SNAI1	TRIM27	USP11	USP7	WDR5	YAF2	YY1AP1	YY2	ZBTB16
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.126497	NM_153207	AEBP2	AE binding protein 2
A02	Hs.468972	NM_006015	ARID1A	AT rich interactive domain 1A (SWI-like)
A03	Hs.291587	NM_017519	ARID1B	AT rich interactive domain 1B (SWI1-like)
A04	Hs.521530	NM_004674	ASH2L	Ash2 (absent, small, or homeotic)-like (Drosophila)
A05	Hs.374043	NM_015338	ASXL1	Additional sex combs like 1 (Drosophila)
A06	Hs.594386	NM_018263	ASXL2	Additional sex combs like 2 (Drosophila)
A07	Hs.464876	NM_030632	ASXL3	Additional sex combs like 3 (Drosophila)
A08	Hs.106674	NM_004656	BAP1	BRCA1 associated protein-1 (ubiquitin carboxy-terminal hydrolase)
A09	Hs.380403	NM_005180	BMI1	BMI1 polycomb ring finger oncogene
A10	Hs.77254	NM_006807	CBX1	Chromobox homolog 1
A11	Hs.368410	NM_032647	CBX2	Chromobox homolog 2
A12	Hs.381189	NM_007276	CBX3	Chromobox homolog 3
B01	Hs.714363	NM_003655	CBX4	Chromobox homolog 4
B02	Hs.349283	NM_012117	CBX5	Chromobox homolog 5
B03	Hs.356416	NM_175709	CBX7	Chromobox homolog 7
B04	Hs.387258	NM_020649	CBX8	Chromobox homolog 8
B05	Hs.501345	NM_022802	CTBP2	C-terminal binding protein 2
B06	Hs.180933	NM_014593	CXXC1	CXXC finger protein 1
B07	Hs.202672	NM_001379	DNMT1	DNA (cytosine-5-)-methyltransferase 1
B08	Hs.515840	NM_022552	DNMT3A	DNA (cytosine-5-)-methyltransferase 3 alpha
B09	Hs.643024	NM_006892	DNMT3B	DNA (cytosine-5-)-methyltransferase 3 beta
B10	Hs.592165	NM_013369	DNMT3L	DNA (cytosine-5-)-methyltransferase 3-like
B11	Hs.603093	NM_198256	E2F6	E2F transcription factor 6
B12	Hs.503510	NM_003797	EED	Embryonic ectoderm development
C01	Hs.167805	NM_025209	EPC1	Enhancer of polycomb homolog 1 (Drosophila)
C02	Hs.23270	NM_015630	EPC2	Enhancer of polycomb homolog 2 (Drosophila)
C03	Hs.194669	NM_001991	EZH1	Enhancer of zeste homolog 1 (Drosophila)
C04	Hs.444082	NM_004456	EZH2	Enhancer of zeste homolog 2 (Drosophila)
C05	Hs.3068	NM_003071	HLTF	Helicase-like transcription factor
C06	Hs.518450	NM_002111	HTT	Huntingtin
C07	Hs.292949	NM_017553	INO80	INO80 homolog (S. cerevisiae)
C08	Hs.410786	NM_031288	INO80B	INO80 complex subunit B
C09	Hs.464903	NM_194281	INO80C	INO80 complex subunit C
C10	Hs.445036	NM_017759	INO80D	INO80 complex subunit D
C11	Hs.630189	NM_004973	JARID2	Jumonji, AT rich interactive domain 2
C12	Hs.524800	NM_032590	KDM2B	Lysine (K)-specific demethylase 2B
D01	Hs.80358	NM_004653	KDM5D	Lysine (K)-specific demethylase 5D
D02	Hs.517641	NM_031488	L3MBTL2	L(3)mbt-like 2 (Drosophila)
D03	Hs.713663	NM_016648	LARP7	La ribonucleoprotein domain family, member 7
D04	Hs.656803	NM_017643	MBTD1	Mbt domain containing 1
D05	Hs.120228	NM_003482	MLL2	Myeloid/lymphoid or mixed-lineage leukemia 2
D06	Hs.647120	NM_170606	MLL3	Myeloid/lymphoid or mixed-lineage leukemia 3
D07	Hs.92236	NM_014727	MLL4	Myeloid/lymphoid or mixed-lineage leukemia 4
D08	Hs.592262	NM_182931	MLL5	Myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homolog, Drosophila)
D09	Hs.514941	NM_020963	MOV10	Mov10, Moloney leukemia virus 10, homolog (mouse)

Position	UniGene	GenBank	Symbol	Description
D10	Hs.31016	NM_007358	MTF2	Metal response element binding transcription factor 2
D11	Hs.189920	NM_018165	PBRM1	Polybromo 1
D12	Hs.316750	NM_032673	PCGF1	Polycomb group ring finger 1
E01	Hs.371617	NM_007144	PCGF2	Polycomb group ring finger 2
E02	Hs.500512	NM_032373	PCGF5	Polycomb group ring finger 5
E03	Hs.305985	NM_004426	PHC1	Polyhomeotic homolog 1 (Drosophila)
E04	Hs.524271	NM_198040	PHC2	Polyhomeotic homolog 2 (Drosophila)
E05	Hs.529592	NM_024947	PHC3	Polyhomeotic homolog 3 (Drosophila)
E06	Hs.166204	NM_002636	PHF1	PHD finger protein 1
E07	Hs.460124	NM_001009936	PHF19	PHD finger protein 19
E08	Hs.79081	NM_002710	PPP1CC	Protein phosphatase 1, catalytic subunit, gamma isozyme
E09	Hs.533474	NM_002713	PPP1R8	Protein phosphatase 1, regulatory (inhibitor) subunit 8
E10	Hs.16003	NM_005610	RBBP4	Retinoblastoma binding protein 4
E11	Hs.519230	NM_005057	RBBP5	Retinoblastoma binding protein 5
E12	Hs.495755	NM_002893	RBBP7	Retinoblastoma binding protein 7
F01	Hs.655516	NM_004164	RBP2	Retinol binding protein 2, cellular
F02	Hs.631989	NM_002931	RING1	Ring finger protein 1
F03	Hs.518545	NM_021133	RNASEL	Ribonuclease L (2',5'-oligoisoadenylate synthetase-dependent)
F04	Hs.591490	NM_007212	RNF2	Ring finger protein 2
F05	Hs.694786	NM_012234	RYBP	RING1 and YY1 binding protein
F06	Hs.571874	NM_012236	SCMH1	Sex comb on midleg homolog 1 (Drosophila)
F07	Hs.495774	NM_006089	SCML2	Sex comb on midleg-like 2 (Drosophila)
F08	Hs.369779	NM_012238	SIRT1	Sirtuin 1
F09	Hs.152292	NM_003069	SMARCA1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 1
F10	Hs.298990	NM_003070	SMARCA2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2
F11	Hs.327527	NM_003072	SMARCA4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4
F12	Hs.558422	NM_003601	SMARCA5	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5
G01	Hs.534350	NM_003073	SMARCB1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1
G02	Hs.476179	NM_003074	SMARCC1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 1
G03	Hs.236030	NM_003075	SMARCC2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
G04	Hs.48029	NM_005985	SNAI1	Snail homolog 1 (Drosophila)
G05	Hs.440382	NM_006510	TRIM27	Tripartite motif containing 27
G06	Hs.171501	NM_004651	USP11	Ubiquitin specific peptidase 11
G07	Hs.706830	NM_003470	USP7	Ubiquitin specific peptidase 7 (herpes virus-associated)
G08	Hs.397638	NM_017588	WDR5	WD repeat domain 5
G09	Hs.708084	NM_005748	YAF2	YY1 associated factor 2
G10	Hs.584927	NM_139118	YY1AP1	YY1 associated protein 1
G11	Hs.673601	NM_206923	YY2	YY2 transcription factor
G12	Hs.591945	NM_006006	ZBTB16	Zinc finger and BTB domain containing 16
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 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
RT² 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
RT² 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.

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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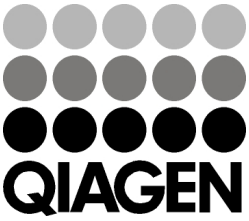

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