

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

Human Hematopoiesis

Cat. no. 330231 PAHS-054ZA

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™



Description

The Human Hematopoiesis RT² Profiler PCR Array profiles the expression of 84 genes related to the development of blood-cell lineages from HSCs through progenitor stem cells. Blood cell lineage-specific molecular markers are represented on this array. The cytokines, signaling molecules, and other regulators that are important in stem cell commitment and differentiation are included as well. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to hematopoietic stem cells and hematopoiesis 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	ANGPT1	APC	ASH2L	BLNK	CBFB	CCR1	CD14	CD164	CD1D	CD2	CD27	CD34
B	CD3D	CD3G	CD4	CD44	CD80	CD86	CD8A	CEBPE	CEBPG	CHST15	CSF1	CSF2
C	DLL1	ETS1	ETV6	FLT3LG	FUT10	FZD1	GATA1	GATA2	HDAC4	HDAC5	HDAC7	HDAC9
D	IL10	IL11	IL12B	IL1A	IL2	IL20	IL25	IL31RA	IL6ST	INHBA	INHBA	JAG1
E	JAG2	KDR	KIT	KITLG	LEF1	LMO2	LRMP	MAL	MAP4K1	MMP9	NCOA6	NOS2
F	NOTCH1	NOTCH2	NOTCH4	PAX5	PECAM1	PF4	PTPRC	RBPJ	RUNX1	SFXN1	SOCS5	SPP1
G	STAT1	STAT3	STM2	TAL1	TEK	TLR3	TLR4	TNFSF11	TRIM10	VAV1	VEGFA	WNT3A
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.369675	NM_001146	ANGPT1	Angiopoietin 1
A02	Hs.158932	NM_000038	APC	Adenomatous polyposis coli
A03	Hs.521530	NM_004674	ASH2L	Ash2 (absent, small, or homeotic)-like (Drosophila)
A04	Hs.665244	NM_013314	BLNK	B-cell linker
A05	Hs.460988	NM_001755	CBFB	Core-binding factor, beta subunit
A06	Hs.301921	NM_001295	CCR1	Chemokine (C-C motif) receptor 1
A07	Hs.163867	NM_000591	CD14	CD14 molecule
A08	Hs.520313	NM_006016	CD164	CD164 molecule, sialomucin
A09	Hs.1799	NM_001766	CD1D	CD1d molecule
A10	Hs.523500	NM_001767	CD2	CD2 molecule
A11	Hs.355307	NM_001242	CD27	CD27 molecule
A12	Hs.374990	NM_001773	CD34	CD34 molecule
B01	Hs.504048	NM_000732	CD3D	CD3d molecule, delta (CD3-TCR complex)
B02	Hs.2259	NM_000073	CD3G	CD3g molecule, gamma (CD3-TCR complex)
B03	Hs.631659	NM_000616	CD4	CD4 molecule
B04	Hs.502328	NM_000610	CD44	CD44 molecule (Indian blood group)
B05	Hs.838	NM_005191	CD80	CD80 molecule
B06	Hs.171182	NM_006889	CD86	CD86 molecule
B07	Hs.85258	NM_001768	CD8A	CD8a molecule
B08	Hs.558308	NM_001805	CEBPE	CCAAT/enhancer binding protein (C/EBP), epsilon
B09	Hs.429666	NM_001806	CEBPG	CCAAT/enhancer binding protein (C/EBP), gamma
B10	Hs.287537	NM_015892	CHST15	Carbohydrate (N-acetylglucosamine 4-sulfate 6-O) sulfotransferase 15
B11	Hs.591402	NM_000757	CSF1	Colony stimulating factor 1 (macrophage)
B12	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
C01	Hs.379912	NM_005618	DLL1	Delta-like 1 (Drosophila)
C02	Hs.369438	NM_005238	ETS1	V-ets erythroblastosis virus E26 oncogene homolog 1 (avian)
C03	Hs.504765	NM_001987	ETV6	Ets variant 6
C04	Hs.428	NM_001459	FLT3LG	Fms-related tyrosine kinase 3 ligand
C05	Hs.458713	NM_032664	FUT10	Fucosyltransferase 10 (alpha (1,3) fucosyltransferase)
C06	Hs.94234	NM_003505	FZD1	Frizzled family receptor 1
C07	Hs.765	NM_002049	GATA1	GATA binding protein 1 (globin transcription factor 1)
C08	Hs.367725	NM_032638	GATA2	GATA binding protein 2
C09	Hs.20516	NM_006037	HDAC4	Histone deacetylase 4
C10	Hs.438782	NM_005474	HDAC5	Histone deacetylase 5
C11	Hs.200063	NM_001098416	HDAC7	Histone deacetylase 7
C12	Hs.196054	NM_178425	HDAC9	Histone deacetylase 9
D01	Hs.193717	NM_000572	IL10	Interleukin 10
D02	Hs.467304	NM_000641	IL11	Interleukin 11
D03	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
D04	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
D05	Hs.89679	NM_000586	IL2	Interleukin 2
D06	Hs.272373	NM_018724	IL20	Interleukin 20
D07	Hs.302036	NM_022789	IL25	Interleukin 25
D08	Hs.55378	NM_139017	IL31RA	Interleukin 31 receptor A

Position	UniGene	GenBank	Symbol	Description
D09	Hs.532082	NM_002184	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
D10	Hs.407506	NM_002191	INHHA	Inhibin, alpha
D11	Hs.583348	NM_002192	INHBA	Inhibin, beta A
D12	Hs.728907	NM_000214	JAG1	Jagged 1
E01	Hs.433445	NM_002226	JAG2	Jagged 2
E02	Hs.479756	NM_002253	KDR	Kinase insert domain receptor (a type III receptor tyrosine kinase)
E03	Hs.479754	NM_000222	KIT	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E04	Hs.1048	NM_003994	KITLG	KIT ligand
E05	Hs.555947	NM_016269	LEF1	Lymphoid enhancer-binding factor 1
E06	Hs.34560	NM_005574	LMO2	LIM domain only 2 (rhombotin-like 1)
E07	Hs.124922	NM_006152	LRMP	Lymphoid-restricted membrane protein
E08	Hs.80395	NM_002371	MAL	Mal, T-cell differentiation protein
E09	Hs.95424	NM_007181	MAP4K1	Mitogen-activated protein kinase kinase kinase kinase 1
E10	Hs.297413	NM_004994	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
E11	Hs.368971	NM_014071	NCOA6	Nuclear receptor coactivator 6
E12	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
F01	Hs.495473	NM_017617	NOTCH1	Notch 1
F02	Hs.487360	NM_024408	NOTCH2	Notch 2
F03	Hs.436100	NM_004557	NOTCH4	Notch 4
F04	Hs.654464	NM_016734	PAX5	Paired box 5
F05	Hs.514412	NM_000442	PECAM1	Platelet/endothelial cell adhesion molecule
F06	Hs.81564	NM_002619	PF4	Platelet factor 4
F07	Hs.654514	NM_002838	PTPRC	Protein tyrosine phosphatase, receptor type, C
F08	Hs.479396	NM_005349	RBPJ	Recombination signal binding protein for immunoglobulin kappa J region
F09	Hs.149261	NM_001754	RUNX1	Runt-related transcription factor 1
F10	Hs.369440	NM_022754	SFXN1	Sideroflexin 1
F11	Hs.468426	NM_144949	SOCS5	Suppressor of cytokine signaling 5
F12	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1
G01	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
G02	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G03	Hs.135763	NM_020860	STIM2	Stromal interaction molecule 2
G04	Hs.705618	NM_003189	TAL1	T-cell acute lymphocytic leukemia 1
G05	Hs.89640	NM_000459	TEK	TEK tyrosine kinase, endothelial
G06	Hs.657724	NM_003265	TLR3	Toll-like receptor 3
G07	Hs.174312	NM_138554	TLR4	Toll-like receptor 4
G08	Hs.333791	NM_003701	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Hs.709483	NM_006778	TRIM10	Tripartite motif containing 10
G10	Hs.116237	NM_005428	VAV1	Vav 1 guanine nucleotide exchange factor
G11	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G12	Hs.336930	NM_033131	WNT3A	Wingless-type MMTV integration site family, member 3A
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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