

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

Rat Hematopoiesis

Cat. no. 330231 PARN-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™



Sample & Assay Technologies

Description

The Rat 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	Bcl11a	Blnk	Cbfb	Ccr1	Cd14	Cd164	Cd1d1	Cd2	Cd27
B	Cd34	Cd3d	Cd3g	Cd4	Cd44	Cd80	Cd86	Cd8a	Cebpe	Cebpg	Csf1	Csf2
C	Dll1	Egr1	Eraf	Ets1	Etv6	Fzd1	Gata1	Gata2	Hdac4	Hdac5	Hdac7	Hdac9
D	Hoxb4	Il10	Il11	Il12b	Il1a	Il2	Il20	Il25	Il6st	Inha	Inhba	Irf4
E	Irf8	Jag1	Jag2	Kdr	Kit	Klf6	Klf6	Lef1	Lmo2	Mal	Map4k1	Mmp9
F	Ncoa6	Nos2	Notch1	Notch2	Notch4	Pecam1	Pf4	Piprc	Rhoh	Runx1	Sfn1	Socs5
G	Spp1	Stat1	Stat3	Stim2	Tal1	Tek	Tlr3	Tlr4	Tnfrsf11	Vav1	Vegfa	Wnt3a
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.161953	NM_053546	Angpt1	Angiopoietin 1
A02	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A03	Rn.219095	NM_001106089	Ash2l	Ash2 (absent, small, or homeotic)-like (Drosophila)
A04	Rn.16729	XM_223693	Bcl11a	B-cell CLL/lymphoma 11A (zinc finger protein)
A05	Rn.32684	NM_001025767	Blnk	B-cell linker
A06	Rn.7308	NM_001013191	Cbfb	Core-binding factor, beta subunit
A07	Rn.34673	NM_020542	Ccr1	Chemokine (C-C motif) receptor 1
A08	Rn.42942	NM_021744	Cd14	CD14 molecule
A09	Rn.3733	NM_031812	Cd164	CD164 molecule, sialomucin
A10	Rn.11120	NM_017079	Cd1d1	CD1d1 molecule
A11	Rn.10328	NM_012830	Cd2	Cd2 molecule
A12	Rn.134200	NM_001024335	Cd27	CD27 molecule
B01	Rn.219720	NM_001107202	Cd34	CD34 molecule
B02	Rn.10329	NM_013169	Cd3d	CD3 molecule, delta
B03	Rn.202653	NM_001077646	Cd3g	CD3 molecule, gamma
B04	Rn.10748	NM_012705	Cd4	Cd4 molecule
B05	Rn.1120	NM_012924	Cd44	Cd44 molecule
B06	Rn.10138	NM_012926	Cd80	Cd80 molecule
B07	Rn.6734	NM_020081	Cd86	CD86 molecule
B08	Rn.10306	NM_031538	Cd8a	CD8a molecule
B09	Rn.44462	NM_017095	Cebpe	CCAAT/enhancer binding protein (C/EBP), epsilon
B10	Rn.10332	NM_012831	Cebpg	CCAAT/enhancer binding protein (C/EBP), gamma
B11	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B12	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
C01	Rn.10628	NM_032063	Dll1	Delta-like 1 (Drosophila)
C02	Rn.9096	NM_012551	Egr1	Early growth response 1
C03	Rn.136569	NM_001106299	Eraf	Erythroid associated factor
C04	Rn.88756	NM_012555	Ets1	V-ets erythroblastosis virus E26 oncogene homolog 1 (avian)
C05	Rn.147424	NM_001037353	Etv6	Ets variant 6
C06	Rn.6575	NM_021266	Fzd1	Frizzled homolog 1 (Drosophila)
C07	Rn.10024	NM_012764	Gata1	GATA binding protein 1
C08	Rn.34322	NM_033442	Gata2	GATA binding protein 2
C09	Rn.23483	XM_343629	Hdac4	Histone deacetylase 4
C10	Rn.79863	NM_053450	Hdac5	Histone deacetylase 5
C11	Rn.203327	XM_345868	Hdac7	Histone deacetylase 7
C12	Rn.198197	XM_234063	Hdac9	Histone deacetylase 9
D01	Rn.209614	NM_001100787	Hoxb4	Homeo box B4
D02	Rn.9868	NM_012854	Il10	Interleukin 10
D03	Rn.198483	NM_133519	Il11	Interleukin 11
D04	Rn.48686	NM_022611	Il12b	Interleukin 12b
D05	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
D06	Rn.9871	NM_053836	Il2	Interleukin 2
D07	Rn.222008	NM_001143881	Il20	Interleukin 20
D08	Rn.141273	XM_577423	Il25	Interleukin 25
D09	Rn.12138	NM_001008725	Il6st	Interleukin 6 signal transducer

Position	UniGene	GenBank	Symbol	Description
D10	Rn.8831	NM_012590	Inha	Inhibin alpha
D11	Rn.9874	NM_017128	Inhba	Inhibin beta-A
D12	Rn.82114	NM_001106108	Irf4	Interferon regulatory factor 4
E01	Rn.3765	NM_001008722	Irf8	Interferon regulatory factor 8
E02	Rn.88804	NM_019147	Jag1	Jagged 1
E03	Rn.22459	XM_343119	Jag2	Jagged 2
E04	Rn.88869	NM_013062	Kdr	Kinase insert domain receptor
E05	Rn.54004	NM_022264	Kit	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E06	Rn.44216	NM_021843	Kitlg	KIT ligand
E07	Rn.163355	NM_031642	Klf6	Kruppel-like factor 6
E08	Rn.21926	NM_130429	Lef1	Lymphoid enhancer binding factor 1
E09	Rn.155591	NM_001037358	Lmo2	LIM domain only 2
E10	Rn.10174	NM_012798	Mal	Mal, T-cell differentiation protein
E11	Rn.137063	NM_001106243	Map4k1	Mitogen activated protein kinase kinase kinase kinase 1
E12	Rn.10209	NM_031055	Mmp9	Matrix metalloproteinase 9
F01	Rn.9077	XM_342552	Ncoa6	Nuclear receptor coactivator 6
F02	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
F03	Rn.25046	NM_001105721	Notch1	Notch homolog 1, translocation-associated (Drosophila)
F04	Rn.65930	NM_024358	Notch2	Notch homolog 2 (Drosophila)
F05	Rn.12967	NM_001002827	Notch4	Notch homolog 4 (Drosophila)
F06	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
F07	Rn.6800	NM_001007729	Pf4	Platelet factor 4
F08	Rn.90166	NM_001109887	Ptpcr	Protein tyrosine phosphatase, receptor type, C
F09	Rn.20618	NM_001013430	Rhoh	Ras homolog gene family, member H
F10	Rn.11201	NM_017325	Runx1	Runt-related transcription factor 1
F11	Rn.115752	NM_001012213	Sfn1	Sideroflexin 1
F12	Rn.47568	NM_001109274	Socs5	Suppressor of cytokine signaling 5
G01	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
G02	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G03	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G04	Rn.162277	NM_001105750	Stim2	Stromal interaction molecule 2
G05	Rn.9434	NM_001107958	Tal1	T-cell acute lymphocytic leukemia 1
G06	Rn.9159	NM_001105737	Tek	TEK tyrosine kinase, endothelial
G07	Rn.15273	NM_198791	Tlr3	Toll-like receptor 3
G08	Rn.14534	NM_019178	Tlr4	Toll-like receptor 4
G09	Rn.64517	NM_057149	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G10	Rn.48861	NM_012759	Vav1	Vav 1 guanine nucleotide exchange factor
G11	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G12	Rn.218621	XM_220546	Wnt3a	Wingless-type MMTV integration site family, member 3A
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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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