

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

Rat Stem Cell

Cat. no. 330231 PARN-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™



Description

The Rat 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 cell 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	Act1	Adar	Aldh1a1	Aldh2	Alpi	Apc	Ascl2	Axin1	Bglap	Bmp1
B	Bmp2	Bmp3	Btrc	Catna1	Ccna2	Ccnd1	Ccnd2	Ccne1	Cd19	Cd3d	Cd3e	Cd4
C	Cd44	Cd8a	Cd8b	Cdc42	Cdh1	Cdh2	Cdk1	Col1a1	Col2a1	Col9a1	Cxcl12	Dhh
D	Dll1	Dll3	Dlx2	Dvl1	Ep300	Fgf1	Fgf2	Fgf3	Fgf4	Fgfr1	Foxo2	Fzd1
E	Gdf3	Gja1	Gjb1	Hdac1	Hdac2	Hspa9	Igf1	Ilh	Isl1	Jag1	Kat2a	Krt15
F	LOC306312	Mme	Msx1	Myc	Myod1	Myst1	Myst2	Ncam1	Neurog2	Notch1	Notch2	Numb
G	Pard6a	Pdx1	Ppard	Pparg	Rb1	S100b	Sigmar1	Sox2	T	Tert	Tubb3	Wnt1
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.13131	NM_181381	Abcg2	ATP-binding cassette, subfamily G (WHITE), member 2
A02	Rn.54503	NM_022190	Acan	Aggrecan
A03	Rn.3114	NM_019183	Act1	Actin, alpha, cardiac muscle 1
A04	Rn.10056	NM_031006	Adar	Adenosine deaminase, RNA-specific
A05	Rn.6132	NM_022407	Aldh1a1	Aldehyde dehydrogenase 1 family, member A1
A06	Rn.101781	NM_032416	Aldh2	Aldehyde dehydrogenase 2 family (mitochondrial)
A07	Rn.48774	NM_022665	Alpi	Alkaline phosphatase, intestinal
A08	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A09	Rn.10486	NM_031503	Ascl2	Achaete-scute complex homolog 2 (Drosophila)
A10	Rn.31781	NM_024405	Axin1	Axin 1
A11	Rn.9722	NM_013414	Bglap	Bone gamma-carboxyglutamate (gla) protein
A12	Rn.9305	NM_031323	Bmp1	Bone morphogenetic protein 1
B01	Rn.90931	NM_017178	Bmp2	Bone morphogenetic protein 2
B02	Rn.208979	NM_017105	Bmp3	Bone morphogenetic protein 3
B03	Rn.21800	NM_001007148	Btrc	Beta-transducin repeat containing
B04	Rn.103790	NM_001007145	Catna1	Catenin (cadherin associated protein), alpha 1
B05	Rn.13094	NM_053702	Ccna2	Cyclin A2
B06	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B07	Rn.96083	NM_022267	Ccnd2	Cyclin D2
B08	Rn.15455	NM_001100821	Ccne1	Cyclin E1
B09	Rn.105569	NM_001013237	Cd19	CD19 molecule
B10	Rn.10329	NM_013169	Cd3d	CD3 molecule, delta
B11	Rn.96221	NM_001108140	Cd3e	CD3 molecule, epsilon
B12	Rn.10748	NM_012705	Cd4	CD4 molecule
C01	Rn.1120	NM_012924	Cd44	CD44 molecule
C02	Rn.10306	NM_031538	Cd8a	CD8a molecule
C03	Rn.10330	NM_031539	Cd8b	CD8b molecule
C04	Rn.60067	NM_171994	Cdc42	Cell division cycle 42 (GTP binding protein)
C05	Rn.1303	NM_031334	Cdh1	Cadherin 1
C06	Rn.23200	NM_031333	Cdh2	Cadherin 2
C07	Rn.6934	NM_019296	Cdk1	Cyclin-dependent kinase 1
C08	Rn.2953	NM_053304	Col1a1	Collagen, type I, alpha 1
C09	Rn.10124	NM_012929	Col2a1	Collagen, type II, alpha 1
C10	Rn.90726	XM_223124	Col9a1	Collagen, type IX, alpha 1
C11	Rn.54439	NM_022177	Cxcl12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
C12	Rn.198251	NM_053367	Dhh	Desert hedgehog homolog (Drosophila)
D01	Rn.10628	NM_032063	Dll1	Delta-like 1 (Drosophila)
D02	Rn.23105	NM_053666	Dll3	Delta-like 3 (Drosophila)
D03	Rn.18077	NM_001107157	Dlx2	Deltex homolog 2 (Drosophila)
D04	Rn.144610	NM_031820	Dvl1	Dishevelled, dsh homolog 1 (Drosophila)
D05	Rn.12447	XM_576312	Ep300	E1A binding protein p300
D06	Rn.88013	NM_012846	Fgf1	Fibroblast growth factor 1
D07	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
D08	Rn.81236	NM_130817	Fgf3	Fibroblast growth factor 3
D09	Rn.81223	NM_053809	Fgf4	Fibroblast growth factor 4

Position	UniGene	GenBank	Symbol	Description
D10	Rn.9797	NM_024146	Fgfr1	Fibroblast growth factor receptor 1
D11	Rn.10948	NM_012743	Foxa2	Forkhead box A2
D12	Rn.6575	NM_021266	Fzd1	Frizzled homolog 1 (Drosophila)
E01	Rn.202592	NM_001109671	Gdf3	Growth differentiation factor 3
E02	Rn.10346	NM_012567	Gja1	Gap junction protein, alpha 1
E03	Rn.10444	NM_017251	Gjb1	Gap junction protein, beta 1
E04	Rn.1863	NM_001025409	Hdac1	Histone deacetylase 1
E05	Rn.1797	NM_053447	Hdac2	Histone deacetylase 2
E06	Rn.7535	NM_001100658	Hspa9	Heat shock protein 9
E07	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
E08	Rn.8711	NM_053384	lhh	Indian hedgehog
E09	Rn.202645	NM_017339	Isl1	ISL LIM homeobox 1
E10	Rn.88804	NM_019147	Jag1	Jagged 1
E11	Rn.53502	NM_001107050	Kat2a	K(lysine) acetyltransferase 2A
E12	Rn.153568	NM_001004022	Krt15	Keratin 15
F01	Rn.144148	XR_085639	LOC306312	Similar to RNA polymerase II transcription factor SIII subunit A2 (Elongin A2) (EloA2) (Transcription elongation factor B polypeptide 3B)
F02	Rn.33598	NM_012608	Mme	Membrane metallo-endopeptidase
F03	Rn.18117	NM_031059	Msx1	Msh homeobox 1
F04	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
F05	Rn.9493	NM_176079	Myod1	Myogenic differentiation 1
F06	Rn.205579	NM_001017378	Myst1	MYST histone acetyltransferase 1
F07	Rn.12618	NM_181081	Myst2	MYST histone acetyltransferase 2
F08	Rn.11283	NM_031521	Ncam1	Neural cell adhesion molecule 1
F09	Rn.14910	XM_227716	Neurog2	Neurogenin 2
F10	Rn.25046	NM_001105721	Notch1	Notch homolog 1, translocation-associated (Drosophila)
F11	Rn.65930	NM_024358	Notch2	Notch homolog 2 (Drosophila)
F12	Rn.102078	NM_133287	Numb	Numb homolog (Drosophila)
G01	Rn.16053	NM_001003653	Pard6a	Par-6 (partitioning defective 6,) homolog alpha (C. elegans)
G02	Rn.54603	NM_022852	Pdx1	Pancreatic and duodenal homeobox 1
G03	Rn.96181	NM_013141	Ppard	Peroxisome proliferator-activated receptor delta
G04	Rn.23443	NM_013124	Pparg	Peroxisome proliferator-activated receptor gamma
G05	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
G06	Rn.8937	NM_013191	S100b	S100 calcium binding protein B
G07	Rn.1129	NM_030996	Sigmar1	Sigma non-opioid intracellular receptor 1
G08	Rn.219221	NM_001109181	Sox2	SRY (sex determining region Y)-box 2
G09	Rn.218650	NM_001106209	T	T, brachyury homolog (mouse)
G10	Rn.48802	NM_053423	Tert	Telomerase reverse transcriptase
G11	Rn.43958	NM_139254	Tubb3	Tubulin, beta 3
G12	Rn.138108	NM_001105714	Wnt1	Wingless-type MMTV integration site family, member 1
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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