

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

Rat Neurogenesis

Cat. no. 330231 PARN-404ZA

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 Neurogenesis RT² Profiler PCR Array profiles the expression of 84 genes related to the processes of neurogenesis and neural stem cell differentiation. Genes related to the regulation of key neurogenesis processes such as the cell cycle and cell proliferation, differentiation, motility, and migration are included. This array contains the growth factors and cytokines related to neural stem cells as well as genes involved in synaptic functions, apoptosis, and cell adhesion. Cell signaling genes involved in neurogenesis are represented as well as genes involved in the regulation of transcription. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to neurogenesis and neural stem cells 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	Ache	Adora1	Adora2a	Alk	Apbb1	Apoe	App	Artn	Ascl1	Bcl2	Bdnf	Bmp2
B	Bmp4	Bmp8a	Cdk5r1	Cdk5rap2	Chat	Chrm2	Creb1	Cxcl1	Dcx	Dlg4	Dll1	Drd2
C	Dvl3	Efnb1	Egf	Ep300	Erb2	Fgf2	Flna	Gdnf	Gpi	Grin1	Hdac4	Hes1
D	Hey1	Hey2	Heyl	Il3	Lif	Map2	Mdk	Mef2c	Mll1	Ndn	Ndp	Neurod1
E	Neurog1	Neurog2	Nf1	Nog	Notch1	Notch2	Nrcam	Nrg1	Nrp1	Nrp2	Ntf3	Ntn1
F	Olig2	Pafah1b1	Par3	Pax2	Pax3	Pax6	Pou3f3	Pou4f1	Ptn	Rac1	Robo1	Rtn4
G	S100a6	S100b	Shh	Slit2	Sod1	Sox2	Sox8	Stat3	Tgfb1	Th	Tnr	Vegfa
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.105879	NM_172009	Ache	Acetylcholinesterase
A02	Rn.32078	NM_017155	Adora1	Adenosine A1 receptor
A03	Rn.11180	NM_053294	Adora2a	Adenosine A2a receptor
A04	Rn.202143	NM_001169101	Alk	Anaplastic lymphoma kinase
A05	Rn.19953	NM_080478	Apbb1	Amyloid beta (A4) precursor protein-binding, family B, member 1 (Fe65)
A06	Rn.32351	NM_138828	Apoe	Apolipoprotein E
A07	Rn.2104	NM_019288	App	Amyloid beta (A4) precursor protein
A08	Rn.154711	NM_053397	Artn	Artemin
A09	Rn.32936	NM_022384	Ascl1	Achaete-scute complex homolog 1 (Drosophila)
A10	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A11	Rn.11266	NM_012513	Bdnf	Brain-derived neurotrophic factor
A12	Rn.90931	NM_017178	Bmp2	Bone morphogenetic protein 2
B01	Rn.10318	NM_012827	Bmp4	Bone morphogenetic protein 4
B02	Rn.126011	NM_001109432	Bmp8a	Bone morphogenetic protein 8a
B03	Rn.11213	NM_053891	Cdk5r1	Cyclin-dependent kinase 5, regulatory subunit 1
B04	Rn.13247	XM_575844	Cdk5rap2	CDK5 regulatory subunit associated protein 2
B05	Rn.104846	XM_224626	Chat	Choline acetyltransferase
B06	Rn.10752	NM_031016	Chrm2	Cholinergic receptor, muscarinic 2
B07	Rn.90061	NM_031017	Creb1	CAMP responsive element binding protein 1
B08	Rn.10907	NM_030845	Cxcl1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
B09	Rn.121471	NM_053379	Dcx	Doublecortin
B10	Rn.9765	NM_019621	Dlg4	Discs, large homolog 4 (Drosophila)
B11	Rn.10628	NM_032063	Dll1	Delta-like 1 (Drosophila)
B12	Rn.87299	NM_012547	Drd2	Dopamine receptor D2
C01	Rn.219497	NM_001107081	Dvl3	Dishevelled, dsh homolog 3 (Drosophila)
C02	Rn.44398	NM_017089	Efnb1	Ephrin B1
C03	Rn.6075	NM_012842	Egf	Epidermal growth factor
C04	Rn.12447	XM_576312	Ep300	E1A binding protein p300
C05	Rn.93966	NM_017003	Erb2	V-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
C06	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
C07	Rn.4213	NM_001134599	Flna	Filamin A, alpha
C08	Rn.53970	NM_019139	Gdnf	Glial cell derived neurotrophic factor
C09	Rn.84435	NM_207592	Gpi	Glucose phosphate isomerase
C10	Rn.9840	NM_017010	Grin1	Glutamate receptor, ionotropic, N-methyl D-aspartate 1
C11	Rn.23483	XM_343629	Hdac4	Histone deacetylase 4
C12	Rn.19727	NM_024360	Hes1	Hairy and enhancer of split 1 (Drosophila)
D01	Rn.98202	XM_342216	Hey1	Hairy/enhancer-of-split related with YRPW motif 1
D02	Rn.58672	NM_130417	Hey2	Hairy/enhancer-of-split related with YRPW motif 2
D03	Rn.22252	NM_001107977	Heyl	Hairy/enhancer-of-split related with YRPW motif-like
D04	Rn.10652	NM_031513	Il3	Interleukin 3
D05	Rn.44379	NM_022196	Lif	Leukemia inhibitory factor
D06	Rn.10484	NM_013066	Map2	Microtubule-associated protein 2
D07	Rn.17447	NM_030859	Mdk	Midkine
D08	Rn.2477	XM_574821	Mef2c	Myocyte enhancer factor 2C

Position	UniGene	GenBank	Symbol	Description
D09	Rn.62341	NM_001108139	Mll1	Myeloid/lymphoid or mixed-lineage leukemia 1
D10	Rn.3096	NM_001008558	Ndn	Necdin homolog (mouse)
D11	Rn.45519	NM_001108814	Ndp	Norrie disease (pseudoglioma) (human)
D12	Rn.44289	NM_019218	Neurod1	Neurogenic differentiation 1
E01	Rn.10606	NM_019207	Neurog1	Neurogenin 1
E02	Rn.14910	XM_227716	Neurog2	Neurogenin 2
E03	Rn.10686	NM_012609	Nf1	Neurofibromin 1
E04	Rn.10154	NM_012990	Nog	Noggin
E05	Rn.25046	NM_001105721	Notch1	Notch homolog 1, translocation-associated (Drosophila)
E06	Rn.65930	NM_024358	Notch2	Notch homolog 2 (Drosophila)
E07	Rn.10691	NM_013150	Nrcam	Neuronal cell adhesion molecule
E08	Rn.37438	NM_031588	Nrg1	Neuregulin 1
E09	Rn.10815	NM_145098	Nrp1	Neuropilin 1
E10	Rn.10816	NM_030869	Nrp2	Neuropilin 2
E11	Rn.9715	NM_031073	Ntf3	Neurotrophin 3
E12	Rn.41052	NM_053731	Ntn1	Netrin 1
F01	Rn.22121	NM_001100557	Olig2	Oligodendrocyte lineage transcription factor 2
F02	Rn.5827	NM_031763	Pafah1b1	Platelet-activating factor acetylhydrolase, isoform 1b, subunit 1
F03	Rn.31803	NM_031235	Pard3	Par-3 (partitioning defective 3) homolog (C. elegans)
F04	Rn.137112	NM_001106361	Pax2	Paired box 2
F05	Rn.214198	NM_053710	Pax3	Paired box 3
F06	Rn.89724	NM_013001	Pax6	Paired box 6
F07	Rn.11354	NM_138837	Pou3f3	POU class 3 homeobox 3
F08	Rn.198983	XM_341372	Pou4f1	POU class 4 homeobox 1
F09	Rn.1653	NM_017066	Ptn	Pleiotrophin
F10	Rn.29157	NM_134366	Rac1	Ras-related C3 botulinum toxin substrate 1
F11	Rn.44468	NM_022188	Robo1	Roundabout homolog 1 (Drosophila)
F12	Rn.1348	NM_031831	Rtn4	Reticulon 4
G01	Rn.3233	NM_053485	S100a6	S100 calcium binding protein A6
G02	Rn.8937	NM_013191	S100b	S100 calcium binding protein B
G03	Rn.10432	NM_017221	Shh	Sonic hedgehog
G04	Rn.146652	NM_022632	Slit2	Slit homolog 2 (Drosophila)
G05	Rn.6059	NM_017050	Sod1	Superoxide dismutase 1, soluble
G06	Rn.219221	NM_001109181	Sox2	SRY (sex determining region Y)-box 2
G07	Rn.141194	NM_001106989	Sox8	SRY (sex determining region Y)-box 8
G08	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G09	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G10	Rn.11082	NM_012740	Th	Tyrosine hydroxylase
G11	Rn.11028	NM_013045	Tnr	Tenascin R
G12	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
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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