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

Rat Cell Motility

Cat. no. 330231 PARN-128ZA

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 Rat Cell Motility RT² Profiler PCR Array profiles the expression of 84 key genes involved in the movement of cells. Many cell types rely on cellular movement for important biological processes such as development, as well as infection and injury response. Stimuli such as growth factor release induce specific cells to migrate, requiring actin cytoskeleton mobilization. The actin cytoskeleton, regulated by the Rho small GTPase family, initially forms cellular projections to mediate either the forward movement of a cell or the development of mature cellular processes (e.g. axons). Cells use adhesion proteins to maintain forward progress, from the rolling migration of a leukocyte along the blood vessel endothelium to the mesenchymal movement of a fibroblast along the extracellular matrix. This array contains growth factors and receptors important for chemotaxis, genes involved in Rho family signaling and adhesion, and genes encoding components of various cellular projections. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in cell motility 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	Actn1	Actn3	Actn4	Actr2	Actr3	Akt1	Arf6	Arhgdia	Arhgef7	Baiap2	Bcar1	Capn1
B	Capn2	Cav1	Cdc42	Cfl1	Crk	Csf1	Cttn	Diaph1	Dpp4	Egf	Egfr	Enah
C	Ezr	Fap	Fgf2	Hgf	Igf1	Igf1r	Ilk	Iqub	Itga4	Itgb1	Itgb2	Itgb3
D	Limk1	Mapk1	Met	Mmp14	Mmp2	Mmp9	Msn	Myh10	Myh9	Myl9	Mylk	Pak1
E	Pak4	Pfn1	Pik3ca	Plaur	Plcg1	Pld1	Prkca	Pten	Ptk2	Ptk2b	Ptpn1	Pxn
F	Rac1	Rac2	Rasa1	Rdx	Rho	Rhoa	Rhob	Rhoc	Rnd3	Rock1	Sh3pxd2a	Src
G	Stat3	Svil	Tgfb1	Timp2	Tln1	Vasp	Vcl	Vegfa	Vim	Wasf1	Wasf2	Wipf1
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.6401	NM_031005	Actn1	Actinin, alpha 1
A02	Rn.17592	NM_133424	Actn3	Actinin alpha 3
A03	Rn.15777	NM_031675	Actn4	Actinin alpha 4
A04	Rn.102249	NM_001009268	Actr2	ARP2 actin-related protein 2 homolog (yeast)
A05	Rn.103326	NM_031068	Actr3	ARP3 actin-related protein 3 homolog (yeast)
A06	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A07	Rn.6993	NM_024152	Arf6	ADP-ribosylation factor 6
A08	Rn.1801	NM_001007005	Arhgdia	Rho GDP dissociation inhibitor (GDI) alpha
A09	Rn.146763	NM_053740	Arhgef7	Rho guanine nucleotide exchange factor (GEF) 7
A10	Rn.95155	NM_057196	Baiap2	BAI1-associated protein 2
A11	Rn.40101	NM_012931	Bcar1	Breast cancer anti-estrogen resistance 1
A12	Rn.6037	NM_019152	Capn1	Calpain 1
B01	Rn.6822	NM_017116	Capn2	Calpain 2
B02	Rn.22518	NM_031556	Cav1	Caveolin 1, caveolae protein
B03	Rn.60067	NM_171994	Cdc42	Cell division cycle 42 (GTP binding protein)
B04	Rn.11675	NM_017147	Cfl1	Cofilin 1, non-muscle
B05	Rn.163154	NM_019302	Crk	V-crk sarcoma virus CT10 oncogene homolog (avian)
B06	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B07	Rn.107869	NM_021868	Cttn	Cortactin
B08	Rn.3004	NM_001107393	Diaph1	Diaphanous homolog 1 (Drosophila)
B09	Rn.91364	NM_012789	Dpp4	Dipeptidylpeptidase 4
B10	Rn.6075	NM_012842	Egf	Epidermal growth factor
B11	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
B12	Rn.163240	NM_001012150	Enah	Enabled homolog (Drosophila)
C01	Rn.773	NM_019357	Ezr	Ezrin
C02	Rn.82756	NM_138850	Fap	Fibroblast activation protein, alpha
C03	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
C04	Rn.10468	NM_017017	Hgf	Hepatocyte growth factor
C05	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
C06	Rn.10957	NM_052807	Igf1r	Insulin-like growth factor 1 receptor
C07	Rn.95042	NM_133409	Ilk	Integrin-linked kinase
C08	Rn.11866	NM_001034130	Iqub	IQ motif and ubiquitin domain containing
C09	Rn.12704	NM_001107737	Itga4	Integrin, alpha 4
C10	Rn.25733	NM_017022	Itgb1	Integrin, beta 1
C11	Rn.42962	NM_001037780	Itgb2	Integrin, beta 2
C12	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
D01	Rn.11250	NM_031727	Limk1	LIM domain kinase 1
D02	Rn.34914	NM_053842	Mapk1	Mitogen activated protein kinase 1
D03	Rn.10617	NM_031517	Met	Met proto-oncogene
D04	Rn.10371	NM_031056	Mmp14	Matrix metallopeptidase 14 (membrane-inserted)
D05	Rn.6422	NM_031054	Mmp2	Matrix metallopeptidase 2
D06	Rn.10209	NM_031055	Mmp9	Matrix metallopeptidase 9
D07	Rn.2762	NM_030863	Msn	Moesin
D08	Rn.98166	NM_031520	Myh10	Myosin, heavy chain 10, non-muscle
D09	Rn.11385	NM_013194	Myh9	Myosin, heavy chain 9, non-muscle

Position	UniGene	GenBank	Symbol	Description
D10	Rn.6870	NM_001100885	Myl9	Myosin, light chain 9, regulatory
D11	Rn.203004	NM_001105874	Mylk	Myosin light chain kinase
D12	Rn.9149	NM_017198	Pak1	P21 protein (Cdc42/Rac)-activated kinase 1
E01	Rn.18543	NM_001106238	Pak4	P21 protein (Cdc42/Rac)-activated kinase 4
E02	Rn.1152	NM_022511	Pfn1	Profilin 1
E03	Rn.44193	NM_133399	Pik3ca	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
E04	Rn.82711	NM_017350	Plaur	Plasminogen activator, urokinase receptor
E05	Rn.11243	NM_013187	Plcg1	Phospholipase C, gamma 1
E06	Rn.11130	NM_030992	Pld1	Phospholipase D1
E07	Rn.207908	NM_001105713	Prkca	Protein kinase C, alpha
E08	Rn.22158	NM_031606	Pten	Phosphatase and tensin homolog
E09	Rn.2809	NM_013081	Ptk2	PTK2 protein tyrosine kinase 2
E10	Rn.11025	NM_017318	Ptk2b	PTK2B protein tyrosine kinase 2 beta
E11	Rn.11317	NM_012637	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
E12	Rn.75	NM_001012147	Pxn	Paxillin
F01	Rn.29157	NM_134366	Rac1	Ras-related C3 botulinum toxin substrate 1
F02	Rn.2863	NM_001008384	Rac2	Ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)
F03	Rn.12223	NM_013135	Rasa1	RAS p21 protein activator (GTPase activating protein) 1
F04	Rn.203261	NM_001005889	Rdx	Radixin
F05	Rn.92530	NM_033441	Rho	Rhodopsin
F06	Rn.107401	NM_057132	Rhoa	Ras homolog gene family, member A
F07	Rn.2042	NM_022542	Rhob	Ras homolog gene family, member B
F08	Rn.162614	NM_001106461	Rhoc	Ras homolog gene family, member C
F09	Rn.25153	NM_001007641	Rnd3	Rho family GTPase 3
F10	Rn.89756	NM_031098	Rock1	Rho-associated coiled-coil containing protein kinase 1
F11	Rn.127935	NM_001107606	Sh3pxd2a	SH3 and PX domains 2A
F12	Rn.112600	NM_031977	Src	V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
G01	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G02	Rn.36337	NM_001108416	Svil	Supervillin
G03	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G04	Rn.10161	NM_021989	Timp2	TIMP metallopeptidase inhibitor 2
G05	Rn.7715	NM_001039025	Tln1	Talin 1
G06	Rn.98750	NM_001108475	Vasp	Vasodilator-stimulated phosphoprotein
G07	Rn.164613	NM_001107248	Vcl	Vinculin
G08	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G09	Rn.2710	NM_031140	Vim	Vimentin
G10	Rn.7692	NM_001025114	Wasf1	WAS protein family, member 1
G11	Rn.162111	NM_001013167	Wasf2	WAS protein family, member 2
G12	Rn.161803	NM_057192	Wipf1	WAS/WASL interacting protein 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.
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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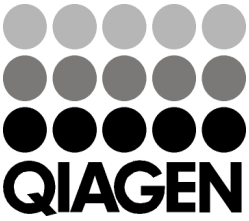

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