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

Rat Heat Shock Proteins & Chaperones

Cat. no. 330231 PARN-076ZA

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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Sample & Assay Technologies

Description

The Rat Heat Shock Proteins & Chaperones RT² Profiler PCR Array profiles the expression of 84 Heat Shock Protein genes that regulate protein folding. Heat shock proteins (HSPs, or molecular chaperones) are important components of cellular networks. HSPs can either aid in the folding and maintenance of newly translated proteins or they can lead to the degradation of misfolded and destabilized proteins. Included on this PCR Array are HSP90 (81 to 99 kD), HSP70 (65 to 80 kD), HSP60 (55 to 64 kD), HSP40 (35 to 54 kD), small HSPs (=34 kD) and other chaperone cofactors that are directly involved in the response to unfolded/misfolded proteins or that are involved in protein folding in general. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of heat shock proteins and chaperones 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	Atf6	Bag1	Bag3	Bag4	Bag5	Cabc1	Ccs	Cct2	Cct3	Cct4	Cct5	Cct6a
B	Cct7	Cct8	Cryaa	Cryab	Dnaja1	Dnaja2	Dnaja3	Dnaja4	Dnajb1	Dnajb11	Dnajb12	Dnajb13
C	Dnajb4	Dnajb5	Dnajb6	Dnajb8	Dnajb9	Dnajc1	Dnajc10	Dnajc11	Dnajc13	Dnajc14	Dnajc15	Dnajc16
D	Dnajc17	Dnajc18	Dnajc2	Dnajc21	Dnajc22	Dnajc3	Dnajc4	Dnajc5	Dnajc5b	Dnajc5g	Dnajc6	Dnajc7
E	Dnajc8	Dnajc9	Dyt1	Hsf1	Hsf2	Hsf4	Hsp90aa1	Hsp90ab1	Hsp90b1	Hspa12a	Hspa12b	Hspa13
F	Hspa14	Hspa1a	Hspa1l	Hspa2	Hspa4	Hspa4l	Hspa5	Hspa9	Hspb1	Hspb2	Hspb3	Hspb6
G	Hspb7	Hspb8	Hspb9	Hspd1	Hspe1	Hsph1	Pfdn1	Pfdn5	Pfdn6	Serpinh1	Sil1	Tcp1
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.221907	NM_001107196	Atf6	Activating transcription factor 6
A02	Rn.16320	NM_001106647	Bag1	BCL2-associated athanogene
A03	Rn.46304	NM_001011936	Bag3	Bcl2-associated athanogene 3
A04	Rn.163329	NM_001025130	Bag4	BCL2-associated athanogene 4
A05	Rn.76368	NM_001008526	Bag5	BCL2-associated athanogene 5
A06	Rn.160865	NM_001013185	Cabc1	Chaperone, ABC1 activity of bc1 complex homolog (S. pombe)
A07	Rn.12311	NM_053425	Ccs	Copper chaperone for superoxide dismutase
A08	Rn.2392	NM_001005905	Cct2	Chaperonin containing TCP1, subunit 2 (beta)
A09	Rn.203147	NM_199091	Cct3	Chaperonin containing Tcp1, subunit 3 (gamma)
A10	Rn.97889	NM_182814	Cct4	Chaperonin containing Tcp1, subunit 4 (delta)
A11	Rn.92645	NM_001004078	Cct5	Chaperonin containing Tcp1, subunit 5 (epsilon)
A12	Rn.33807	NM_001033684	Cct6a	Chaperonin containing Tcp1, subunit 6A (zeta 1)
B01	Rn.62267	NM_001106603	Cct7	Chaperonin containing Tcp1, subunit 7 (eta)
B02	Rn.98524	NM_001105897	Cct8	Chaperonin containing Tcp1, subunit 8 (theta)
B03	Rn.127769	NM_012534	Cryaa	Crystallin, alpha A
B04	Rn.98208	NM_012935	Cryab	Crystallin, alpha B
B05	Rn.64562	NM_022934	Dnaja1	DnaJ (Hsp40) homolog, subfamily A, member 1
B06	Rn.3904	NM_032079	Dnaja2	DnaJ (Hsp40) homolog, subfamily A, member 2
B07	Rn.198254	NM_001038595	Dnaja3	DnaJ (Hsp40) homolog, subfamily A, member 3
B08	Rn.198815	NM_001025411	Dnaja4	DnaJ (Hsp40) homolog, subfamily A, member 4
B09	Rn.128947	NM_001108441	Dnajb1	DnaJ (Hsp40) homolog, subfamily B, member 1
B10	Rn.14603	NM_001015021	Dnajb11	DnaJ (Hsp40) homolog, subfamily B, member 11
B11	Rn.20419	NM_001013907	Dnajb12	DnaJ (Hsp40) homolog, subfamily B, member 12
B12	Rn.45046	NM_001005885	Dnajb13	DnaJ (Hsp40) related, subfamily B, member 13
C01	Rn.198616	NM_001013076	Dnajb4	DnaJ (Hsp40) homolog, subfamily B, member 4
C02	Rn.92865	NM_001108004	Dnajb5	DnaJ (Hsp40) homolog, subfamily B, member 5
C03	Rn.129050	NM_001013209	Dnajb6	DnaJ (Hsp40) homolog, subfamily B, member 6
C04	Rn.125884	NM_001109248	Dnajb8	DnaJ (Hsp40) homolog, subfamily B, member 8
C05	Rn.29778	NM_012699	Dnajb9	DnaJ (Hsp40) homolog, subfamily B, member 9
C06	Rn.40786	XM_214522	Dnajc1	DnaJ (Hsp40) homolog, subfamily C, member 1
C07	Rn.8642	NM_001106486	Dnajc10	DnaJ (Hsp40) homolog, subfamily C, member 10
C08	Rn.66161	NM_001108694	Dnajc11	DnaJ (Hsp40) homolog, subfamily C, member 11
C09	Rn.36397	NM_001108776	Dnajc13	DnaJ (Hsp40) homolog, subfamily C, member 13
C10	Rn.114340	NM_053690	Dnajc14	DnaJ (Hsp40) homolog, subfamily C, member 14
C11	Rn.8092	NM_001106050	Dnajc15	DnaJ (Hsp40) homolog, subfamily C, member 15
C12	Rn.198307	NM_001014194	Dnajc16	DnaJ (Hsp40) homolog, subfamily C, member 16
D01	Rn.41217	XM_230468	Dnajc17	DnaJ (Hsp40) homolog, subfamily C, member 17
D02	Rn.38207	NM_001013887	Dnajc18	DnaJ (Hsp40) homolog, subfamily C, member 18
D03	Rn.11908	NM_053776	Dnajc2	DnaJ (Hsp40) homolog, subfamily C, member 2
D04	Rn.53644	NM_138856	Dnajc21	DnaJ (Hsp40) homolog, subfamily C, member 21
D05	Rn.19564	NM_001014204	Dnajc22	DnaJ (Hsp40) homolog, subfamily C, member 22
D06	Rn.162234	NM_022232	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
D07	Rn.91398	NM_001013196	Dnajc4	DnaJ (Hsp40) homolog, subfamily C, member 4
D08	Rn.100120	NM_024161	Dnajc5	DnaJ (Hsp40) homolog, subfamily C, member 5
D09	Rn.141356	NM_001109180	Dnajc5b	DnaJ (Hsp40) homolog, subfamily C, member 5 beta

Position	UniGene	GenBank	Symbol	Description
D10	Rn.112118	NM_001013242	Dnajc5g	DnaJ (Hsp40) homolog, subfamily C, member 5 gamma
D11	Rn.23812	NM_001107949	Dnajc6	DnaJ (Hsp40) homolog, subfamily C, member 6
D12	Rn.92155	NM_213625	Dnajc7	DnaJ (Hsp40) homolog, subfamily C, member 7
E01	Rn.105212	NM_001013168	Dnajc8	DnaJ (Hsp40) homolog, subfamily C, member 8
E02	Rn.16186	NM_001108865	Dnajc9	DnaJ (Hsp40) homolog, subfamily C, member 9
E03	Rn.20041	NM_153303	Dyt1	Dystonia 1
E04	Rn.20418	NM_024393	Hsf1	Heat shock transcription factor 1
E05	Rn.163428	NM_031694	Hsf2	Heat shock transcription factor 2
E06	Rn.163399	NM_001106177	Hsf4	Heat shock transcription factor 4
E07	Rn.119867	NM_175761	Hsp90aa1	Heat shock protein 90, alpha (cytosolic), class A member 1
E08	Rn.98667	NM_001004082	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
E09	Rn.101146	NM_001012197	Hsp90b1	Heat shock protein 90, beta, member 1
E10	Rn.18598	NM_001107445	Hspa12a	Heat shock protein 12A
E11	Rn.154616	NM_001107778	Hspa12b	Heat shock protein 12B
E12	Rn.11050	NM_019271	Hspa13	Heat shock protein 13
F01	Rn.137392	NM_001004257	Hspa14	Heat shock protein 14
F02	Rn.1950	NM_031971	Hspa1a	Heat shock 70kD protein 1A
F03	Rn.187184	NM_212546	Hspa1l	Heat shock protein 1-like
F04	Rn.211303	NM_021863	Hspa2	Heat shock protein 2
F05	Rn.163092	NM_153629	Hspa4	Heat shock protein 4
F06	Rn.144829	NM_001106428	Hspa4l	Heat shock protein 4-like
F07	Rn.11088	NM_013083	Hspa5	Heat shock protein 5
F08	Rn.7535	NM_001100658	Hspa9	Heat shock protein 9
F09	Rn.3841	NM_031970	Hspb1	Heat shock protein 1
F10	Rn.22486	NM_130431	Hspb2	Heat shock protein beta 2
F11	Rn.20155	NM_031750	Hspb3	Heat shock protein 3
F12	Rn.3201	NM_138887	Hspb6	Heat shock protein, alpha-crystallin-related, B6
G01	Rn.21809	NM_031607	Hspb7	Heat shock protein family, member 7 (cardiovascular)
G02	Rn.102906	NM_053612	Hspb8	Heat shock protein B8
G03	Rn.47212	NM_001108835	Hspb9	Heat shock protein, alpha-crystallin-related, B9
G04	Rn.102058	NM_022229	Hspd1	Heat shock protein 1 (chaperonin)
G05	Rn.106093	NM_012966	Hspe1	Heat shock protein 1 (chaperonin 10)
G06	Rn.37805	NM_001011901	Hsph1	Heat shock 105/110 protein 1
G07	Rn.919	NM_001108427	Pfdn1	Prefoldin subunit 1
G08	Rn.3401	NM_001106794	Pfdn5	Prefoldin subunit 5
G09	Rn.109	NM_212506	Pfdn6	Prefoldin subunit 6
G10	Rn.98199	NM_017173	Serpinh1	Serine (or cysteine) peptidase inhibitor, clade H, member 1
G11	Rn.103851	NM_199376	Sil1	SIL1 homolog, endoplasmic reticulum chaperone (S. cerevisiae)
G12	Rn.7102	NM_012670	Tcp1	T-complex 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.

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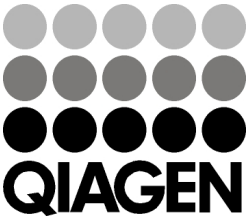

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