

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

Rat p53 Signaling Pathway

Cat. no. 330231 PARN-027ZA

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 p53 Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to p53-mediated signal transduction. The array includes p53-related genes involved in the processes of apoptosis, the cell cycle, cell growth, proliferation, and differentiation, and DNA repair. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to p53 signaling pathway 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	Apaf1	Apex1	Atm	Bag1	Bax	Bbc3	Bcl2	Bid	Birc5	Bnip3	Brca1	Brca2
B	Blg2	Casp2	Casp9	Ccnb1	Ccne1	Ccng1	Ccnh	Cdc25a	Cdc25c	Cdk1	Cdk4	Cdkn1a
C	Cdkn2a	Chek1	Chek2	Cul9	Dapk1	Dnmt1	E2f1	E2f3	Egfr	Egr1	Ep300	Erc1
D	Esr1	Fadd	Fas	Faslg	Foxo3	Gadd45a	Hdac1	Hif1a	Igf1r	Il6	Jun	Kras
E	Lig4	LOC367198	Mcl1	Mdm2	Mdm4	Mlh1	Msh2	Myc	Myod1	NF1	Nrkb1	Pcna
F	Pmaip1	Ppm1d	Prc1	Prkca	Pten	Ptfg1	Rb1	Rela	RGD1566319	Rprm	Serpinh5	Sfn
G	Sirt1	Stat1	Tnf	Tnfrsf10b	Tp53	Tp53bp2	Tp63	Tp73	Wt1	Xrcc4	Xrcc5	Zmat3
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.64522	NM_023979	Apaf1	Apoptotic peptidase activating factor 1
A02	Rn.5949	NM_024148	Apex1	APEX nuclease (multifunctional DNA repair enzyme) 1
A03	Rn.214048	NM_001106821	Atm	Ataxia telangiectasia mutated homolog (human)
A04	Rn.16320	NM_001106647	Bag1	BCL2-associated athanogene
A05	Rn.10668	NM_017059	Bax	Bcl2-associated X protein
A06	Rn.25176	NM_173837	Bbc3	Bcl-2 binding component 3
A07	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
A08	Rn.31142	NM_022684	Bid	BH3 interacting domain death agonist
A09	Rn.54471	NM_022274	Birc5	Baculoviral IAP repeat-containing 5
A10	Rn.2060	NM_053420	Bnip3	BCL2/adenovirus E1B interacting protein 3
A11	Rn.48840	NM_012514	Brca1	Breast cancer 1
A12	Rn.103225	NM_031542	Brca2	Breast cancer 2
B01	Rn.27923	NM_017259	Blg2	BTG family, member 2
B02	Rn.1438	NM_022522	Casp2	Caspase 2
B03	Rn.32199	NM_031632	Casp9	Caspase 9, apoptosis-related cysteine peptidase
B04	Rn.9232	NM_171991	Ccnb1	Cyclin B1
B05	Rn.15455	NM_001100821	Ccne1	Cyclin E1
B06	Rn.5834	NM_012923	Ccng1	Cyclin G1
B07	Rn.23255	NM_052981	Ccnh	Cyclin H
B08	Rn.11390	NM_133571	Cdc25a	Cell division cycle 25 homolog A (S. pombe)
B09	Rn.162298	NM_001107396	Cdc25c	Cell division cycle 25 homolog C (S. pombe)
B10	Rn.6934	NM_019296	Cdk1	Cyclin-dependent kinase 1
B11	Rn.6115	NM_053593	Cdk4	Cyclin-dependent kinase 4
B12	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
C01	Rn.48717	NM_031550	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
C02	Rn.33267	NM_080400	Chek1	CHK1 checkpoint homolog (S. pombe)
C03	Rn.163213	NM_053677	Chek2	CHK2 checkpoint homolog (S. pombe)
C04	Rn.49119	XM_236927	Cul9	Cullin 9
C05	Rn.23108	NM_001107335	Dapk1	Death associated protein kinase 1
C06	Rn.6955	NM_053354	Dnmt1	DNA (cytosine-5-)-methyltransferase 1
C07	Rn.72471	NM_001100778	E2f1	E2F transcription factor 1
C08	Rn.73967	NM_001137626	E2f3	E2F transcription factor 3
C09	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
C10	Rn.9096	NM_012551	Egr1	Early growth response 1
C11	Rn.12447	XM_576312	Ep300	E1A binding protein p300
C12	Rn.7320	NM_001106228	Erc1	Excision repair cross-complementing rodent repair deficiency, complementation group 1
D01	Rn.10595	NM_012689	Esr1	Estrogen receptor 1
D02	Rn.16183	NM_152937	Fadd	Fas (TNFRSF6)-associated via death domain
D03	Rn.162521	NM_139194	Fas	Fas (TNF receptor superfamily, member 6)
D04	Rn.9725	NM_012908	Faslg	Fas ligand (TNF superfamily, member 6)
D05	Rn.24593	NM_001106395	Foxo3	Forkhead box O3
D06	Rn.10250	NM_024127	Gadd45a	Growth arrest and DNA-damage-inducible, alpha
D07	Rn.1863	NM_001025409	Hdac1	Histone deacetylase 1
				Hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription

Position	UniGene	GenBank	Symbol	Description
D08	Rn.10852	NM_024359	Hif1a	factor)
D09	Rn.10957	NM_052807	Igf1r	Insulin-like growth factor 1 receptor
D10	Rn.9873	NM_012589	Il6	Interleukin 6
D11	Rn.93714	NM_021835	Jun	Jun oncogene
D12	Rn.24554	NM_031515	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E01	Rn.219326	NM_001106095	Lig4	Ligase IV, DNA, ATP-dependent
E02	Rn.112309	XM_346005	LOC367198	Similar to Serine/threonine-protein kinase ATR (Ataxia telangiectasia and Rad3-related protein)
E03	Rn.129914	NM_021846	Mcl1	Myeloid cell leukemia sequence 1
E04	Rn.91829	NM_001108099	Mdm2	Mdm2 p53 binding protein homolog (mouse)
E05	Rn.90967	NM_001012026	Mdm4	Mdm4 p53 binding protein homolog (mouse)
E06	Rn.20391	NM_031053	Mlh1	MutL homolog 1 (E. coli)
E07	Rn.3174	NM_031058	Msh2	MutS homolog 2 (E. coli)
E08	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
E09	Rn.9493	NM_176079	Myod1	Myogenic differentiation 1
E10	Rn.10686	NM_012609	Nf1	Neurofibromin 1
E11	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E12	Rn.223	NM_022381	Pcna	Proliferating cell nuclear antigen
F01	Rn.163380	NM_001008385	Pmaip1	Phorbol-12-myristate-13-acetate-induced protein 1
F02	Rn.15540	NM_001105825	Ppm1d	Protein phosphatase 1D magnesium-dependent, delta isoform
F03	Rn.138438	NM_001107529	Prc1	Protein regulator of cytokinesis 1
F04	Rn.207908	NM_001105713	Prkca	Protein kinase C, alpha
F05	Rn.22158	NM_031606	Pten	Phosphatase and tensin homolog
F06	Rn.271	NM_022391	Pttg1	Pituitary tumor-transforming 1
F07	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
F08	Rn.19480	NM_199267	Rela	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
F09	Rn.216753	NM_001109358	RGD156631 9	Similar to Sestrin 2 (Hi95)
F10	Rn.45197	NM_001044276	Rprm	Reprimo, TP53 dependent G2 arrest mediator candidate
F11	Rn.25752	NM_057108	Serpinb5	Serpin peptidase inhibitor, clade B (ovalbumin), member 5
F12	Rn.145079	XM_232745	Sfn	Stratifin
G01	Rn.219976	NM_001107627	Sirt1	Sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae)
G02	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G03	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G04	Rn.105558	NM_001108873	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b
G05	Rn.54443	NM_030989	Tp53	Tumor protein p53
G06	Rn.50333	XM_223012	Tp53bp2	Tumor protein p53 binding protein, 2
G07	Rn.42907	NM_019221	Tp63	Tumor protein p63
G08	Rn.103860	NM_001108696	Tp73	Tumor protein p73
G09	Rn.92531	NM_031534	Wt1	Wilms tumor 1
G10	Rn.40979	NM_001006999	Xrcc4	X-ray repair complementing defective repair in Chinese hamster cells 4
G11	Rn.52078	NM_177419	Xrcc5	X-ray repair complementing defective repair in Chinese hamster cells 5
G12	Rn.2925	NM_022548	Zmat3	Zinc finger, matrix type 3
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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