

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

Rat NFκB Signaling Pathway

Cat. no. 330231 PARN-025ZA

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 NFκB Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 key genes related to NFκB-mediated signal transduction. The array includes genes that encode members of the Rel, NFκB, and IκB families, NFκB-responsive genes, extracellular ligands and receptors that activate the pathway, and kinases and transcription factors that propagate the signal. NFκB-mediated signal transduction has been implicated in the regulation of viral replication, autoimmune diseases, the inflammatory response, tumorigenesis and apoptosis. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes involved in the NFκB signal transduction 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	Agf	Akt1	Aif1	Aif2	Bcl10	Bcl2a1d	Bcl2l1	Bcl3	Birc3	Card10	Card11	Casp1
B	Casp8	Ccl2	Ccl5	Cd40	Cflar	Chuk	Crebbp	Csf1	Csf2	Csf3	Egfr	Egr1
C	Eif2ak2	F2r	Fadd	Faslg	Fos	Hmx1	Icam1	Ifna1	Ifng	Ikbb	Ikke	Ikbkg
D	Il10	Il1a	Il1b	Il1r1	Irak1	Irak2	Irak4	Irf1	Jun	LOC687813	Lta	Ltbr
E	Map2k3	Map3k1	Mapk3	Myd88	Nfkb1	Nfkb2	Nfkbia	Pcaf	Paip1	Raf1	Rel	Rela
F	Ripk1	Ripk2	Smad4	Stat1	Tbk1	Timp1	Tlr1	Tlr2	Tlr3	Tlr4	Tlr6	Tlr9
G	Tnf	Tnfrsf10b	Tnfrsf1a	Tnfrsf1b	Tnfrsf10	Tnfrsf14	Tollip	Tradd	Traf2	Traf3	Traf6	Zap70
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.6319	NM_134432	Agf	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A02	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A03	Rn.105304	NM_001100895	Aif1	Activating transcription factor 1
A04	Rn.9825	NM_031018	Aif2	Activating transcription factor 2
A05	Rn.13007	NM_031328	Bcl10	B-cell CLL/lymphoma 10
A06	Rn.19770	NM_133416	Bcl2a1d	B-cell leukemia/lymphoma 2 related protein A1d
A07	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A08	Rn.23000	NM_001109422	Bcl3	B-cell CLL/lymphoma 3
A09	Rn.64578	NM_023987	Birc3	Baculoviral IAP repeat-containing 3
A10	Rn.138066	NM_001130554	Card10	Caspase recruitment domain family, member 10
A11	Rn.7904	XM_001073551	Card11	Caspase recruitment domain family, member 11
A12	Rn.37508	NM_012762	Casp1	Caspase 1
B01	Rn.54474	NM_022277	Casp8	Caspase 8
B02	Rn.4772	NM_031530	Ccl2	Chemokine (C-C motif) ligand 2
B03	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
B04	Rn.25180	NM_134360	Cd40	CD40 molecule, TNF receptor superfamily member 5
B05	Rn.204752	NM_057138	Cflar	CASP8 and FADD-like apoptosis regulator
B06	Rn.23019	NM_001107588	Chuk	Conserved helix-loop-helix ubiquitous kinase
B07	Rn.108128	NM_133381	Crebbp	CREB binding protein
B08	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B09	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B10	Rn.53973	NM_017104	Csf3	Colony stimulating factor 3 (granulocyte)
B11	Rn.37227	NM_031507	Egfr	Epidermal growth factor receptor
B12	Rn.9096	NM_012551	Egr1	Early growth response 1
C01	Rn.10022	NM_019335	Eif2ak2	Eukaryotic translation initiation factor 2-alpha kinase 2
C02	Rn.2609	NM_012950	F2r	Coagulation factor II (thrombin) receptor
C03	Rn.16183	NM_152937	Fadd	Fas (TNFRSF6)-associated via death domain
C04	Rn.9725	NM_012908	Faslg	Fas ligand (TNF superfamily, member 6)
C05	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C06	Rn.3160	NM_012580	Hmx1	Heme oxygenase (decycling) 1
C07	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
C08	Rn.196548	NM_001014786	Ifna1	Interferon-alpha 1
C09	Rn.10795	NM_138880	Ifng	Interferon gamma
C10	Rn.19222	NM_053355	Ikbb	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta
C11	Rn.18567	NM_001108854	Ikke	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon
C12	Rn.214715	NM_199103	Ikbkg	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
D01	Rn.9868	NM_012854	Il10	Interleukin 10
D02	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
D03	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D04	Rn.9758	NM_013123	Il1r1	Interleukin 1 receptor, type I
D05	Rn.22238	NM_001127555	Irak1	Interleukin-1 receptor-associated kinase 1
D06	Rn.17123	NM_001025422	Irak2	Interleukin-1 receptor-associated kinase 2
D07	Rn.61427	NM_001106791	Irak4	Interleukin-1 receptor-associated kinase 4
D08	Rn.6396	NM_012591	Irf1	Interferon regulatory factor 1
D09	Rn.93714	NM_021835	Jun	Jun oncogene

Position	UniGene	GenBank	Symbol	Description
D10	Rn.136874	XM_001080233	LOC687813	Similar to Tnf receptor-associated factor 1
D11	Rn.160577	NM_080769	Lta	Lymphotoxin alpha (TNF superfamily, member 1)
D12	Rn.19329	NM_001008315	Ltbr	Lymphotoxin beta receptor (TNFR superfamily, member 3)
E01	Rn.100064	NM_001100674	Map2k3	Mitogen activated protein kinase kinase 3
E02	Rn.11081	NM_053887	Map3k1	Mitogen activated protein kinase kinase kinase 1
E03	Rn.2592	NM_017347	Mapk3	Mitogen activated protein kinase 3
E04	Rn.37341	NM_198130	Myd88	Myeloid differentiation primary response gene 88
E05	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E06	Rn.204814	NM_001008349	Nfkb2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p49/p100
E07	Rn.12550	NM_001105720	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
E08	Rn.4126	NM_001024252	Pcaf	P300/CBP-associated factor
E09	Rn.93075	NM_175765	Psip1	PC4 and SFRS1 interacting protein 1
E10	Rn.33262	NM_012639	Raf1	V-raf-leukemia viral oncogene 1
E11	Rn.106948	XM_223688	Rel	V-rel reticuloendotheliosis viral oncogene homolog (avian)
E12	Rn.19480	NM_199267	Rela	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
F01	Rn.7572	NM_001107350	Ripk1	Receptor (TNFRSF)-interacting serine-threonine kinase 1
F02	Rn.102179	XM_342810	Ripk2	Receptor-interacting serine-threonine kinase 2
F03	Rn.9774	NM_019275	Smad4	SMAD family member 4
F04	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
F05	Rn.30683	NM_001106786	Tbk1	TANK-binding kinase 1
F06	Rn.25754	NM_053819	Timp1	TIMP metalloproteinase inhibitor 1
F07	Rn.107212	NM_001172120	Tlr1	Toll-like receptor 1
F08	Rn.46387	NM_198769	Tlr2	Toll-like receptor 2
F09	Rn.15273	NM_198791	Tlr3	Toll-like receptor 3
F10	Rn.14534	NM_019178	Tlr4	Toll-like receptor 4
F11	Rn.163249	NM_207604	Tlr6	Toll-like receptor 6
F12	Rn.92495	NM_198131	Tlr9	Toll-like receptor 9
G01	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G02	Rn.105558	NM_001108873	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b
G03	Rn.11119	NM_013091	Tnfrsf1a	Tumor necrosis factor receptor superfamily, member 1a
G04	Rn.83633	NM_130426	Tnfrsf1b	Tumor necrosis factor receptor superfamily, member 1b
G05	Rn.83627	NM_145681	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G06	N/A	XM_236794	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14
G07	Rn.137040	NM_001109668	Tollip	Toll interacting protein
G08	Rn.18545	NM_001100480	Tradd	TNFRSF1A-associated via death domain
G09	Rn.105232	NM_001107815	Traf2	Tnf receptor-associated factor 2
G10	Rn.12033	NM_001108724	Traf3	Tnf receptor-associated factor 3
G11	Rn.220435	NM_001107754	Traf6	Tnf receptor-associated factor 6
G12	Rn.17862	NM_001012002	Zap70	Zeta-chain (TCR) associated protein kinase
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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