

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

Mouse NFkB Signaling Targets

Cat. no. 330231 PAMM-225ZA

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 Mouse NFκB Signaling Targets RT² Profiler PCR Array profiles the expression of 84 key genes responsive to NFκB signal transduction. The NFκB family of transcription factors regulates multiple cellular processes including inflammation, immunity, and stress responses. The IκB family of inhibitors sequesters these transcription factors in the cytosol. A variety of ligands such as inflammatory cytokines, growth factors, and antigens from pathogens, activate the NFκB pathway, stimulating IκB protein phosphorylation and subsequent degradation. Newly released NFκB transcription factors form active complexes and translocate into the nucleus to induce expression of their target genes. Dysregulation of this signal transduction pathway has been associated with inflammatory or autoimmune diseases. Hundreds of NFκB target genes have been identified using experimental techniques such as expression studies and chromatin immunoprecipitation (ChIP) as well as bioinformatic analyses of predicted transcription factor binding sites. This array includes NFκB transcription factors and highly relevant target genes identified by multiple studies. Results obtained with this array can be used to analyze activation or inhibition of NFκB signaling. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in NFκB-related cellular processes 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	Adm	Agf	Akt1	Aldh3a2	Bcl2a1a	Bcl2l1	Birc2	Birc3	C3	C4a	Ccl12	Ccl22
B	Ccl5	Ccnd1	Ccr5	Cd40	Cd74	Cd80	Cd83	Cdkn1a	Cfb	Csf1	Csf2	Csf2rb
C	Csf3	Cxcl1	Cxcl10	Cxcl3	Cxcl9	Egfr	Egr2	F3	F8	Fas	Fasl	Gadd45b
D	Icam1	Ifnb1	Ifng	Il12b	Il15	Il1a	Il1b	Il1r2	Il1rn	Il2	Il2ra	Il4
E	Il6	Ins2	Irf1	Lta	Ltb	Map2k6	Mitf	Mmp9	Myc	Myd88	Ncoa3	Nfkb1
F	Nfkb2	Nfkbio	Nqo1	Nr4a2	Pdgfb	Plau	Ptgs2	Rel	Rela	Relb	Sele	Selp
G	Snap25	Sod2	Stat1	Stat3	Stat5b	Tnf	Tnfrsf1b	Tnfrsf10	Traf2	Trp53	Vcam1	Xiap
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.1408	NM_009627	Adm	Adrenomedullin
A02	Mm.301626	NM_007428	Agf	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A03	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A04	Mm.398221	NM_007437	Aldh3a2	Aldehyde dehydrogenase family 3, subfamily A2
A05	Mm.425593	NM_009742	Bcl2a1a	B-cell leukemia/lymphoma 2 related protein A1a
A06	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A07	Mm.335659	NM_007465	Birc2	Baculoviral IAP repeat-containing 2
A08	Mm.2026	NM_007464	Birc3	Baculoviral IAP repeat-containing 3
A09	Mm.19131	NM_009778	C3	Complement component 3
A10	Mm.477109	NM_011413	C4a	Complement component 4A (Rodgers blood group)
A11	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A12	Mm.12895	NM_009137	Ccl22	Chemokine (C-C motif) ligand 22
B01	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B02	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B03	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
B04	Mm.271833	NM_011611	Cd40	CD40 antigen
B05	Mm.439737	NM_010545	Cd74	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated)
B06	Mm.89474	NM_009855	Cd80	CD80 antigen
B07	Mm.57175	NM_009856	Cd83	CD83 antigen
B08	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
B09	Mm.653	NM_008198	Cfb	Complement factor B
B10	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B11	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B12	Mm.235324	NM_007780	Csf2rb	Colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage)
C01	Mm.1238	NM_009971	Csf3	Colony stimulating factor 3 (granulocyte)
C02	Mm.21013	NM_008176	Cxcl1	Chemokine (C-X-C motif) ligand 1
C03	Mm.877	NM_021274	Cxcl10	Chemokine (C-X-C motif) ligand 10
C04	Mm.244289	NM_203320	Cxcl3	Chemokine (C-X-C motif) ligand 3
C05	Mm.766	NM_008599	Cxcl9	Chemokine (C-X-C motif) ligand 9
C06	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
C07	Mm.290421	NM_010118	Egr2	Early growth response 2
C08	Mm.273188	NM_010171	F3	Coagulation factor III
C09	Mm.1805	NM_007977	F8	Coagulation factor VIII
C10	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
C11	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
C12	Mm.1360	NM_008655	Gadd45b	Growth arrest and DNA-damage-inducible 45 beta
D01	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
D02	Mm.1245	NM_010510	Ifnb1	Interferon beta 1, fibroblast
D03	Mm.240327	NM_008337	Ifng	Interferon gamma
D04	Mm.239707	NM_008352	Il12b	Interleukin 12B
D05	Mm.4392	NM_008357	Il15	Interleukin 15
D06	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
D07	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
D08	Mm.1349	NM_010555	Il1r2	Interleukin 1 receptor, type II

Position	UniGene	GenBank	Symbol	Description
D09	Mm.882	NM_031167	Il1rn	Interleukin 1 receptor antagonist
D10	Mm.14190	NM_008366	Il2	Interleukin 2
D11	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
D12	Mm.276360	NM_021283	Il4	Interleukin 4
E01	Mm.1019	NM_031168	Il6	Interleukin 6
E02	Mm.4946	NM_008387	Ins2	Insulin II
E03	Mm.105218	NM_008390	Irf1	Interferon regulatory factor 1
E04	Mm.87787	NM_010735	Lta	Lymphotoxin A
E05	Mm.1715	NM_008518	Ltb	Lymphotoxin B
E06	Mm.14487	NM_011943	Map2k6	Mitogen-activated protein kinase kinase 6
E07	Mm.333284	NM_008601	Mitf	Microphthalmia-associated transcription factor
E08	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
E09	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
E10	Mm.213003	NM_010851	Myd88	Myeloid differentiation primary response gene 88
E11	Mm.476883	NM_008679	Ncoa3	Nuclear receptor coactivator 3
E12	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
F01	Mm.102365	NM_019408	Nfkb2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p49/p100
F02	Mm.170515	NM_010907	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F03	Mm.252	NM_008706	Nqo1	NAD(P)H dehydrogenase, quinone 1
F04	Mm.3507	NM_013613	Nr4a2	Nuclear receptor subfamily 4, group A, member 2
F05	Mm.144089	NM_011057	Pdgfb	Platelet derived growth factor, B polypeptide
F06	Mm.4183	NM_008873	Plau	Plasminogen activator, urokinase
F07	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F08	Mm.4869	NM_009044	Rel	Reticuloendotheliosis oncogene
F09	Mm.249966	NM_009045	Rela	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
F10	Mm.1741	NM_009046	Relb	Avian reticuloendotheliosis viral (v-rel) oncogene related B
F11	Mm.5245	NM_011345	Sele	Selectin, endothelial cell
F12	Mm.3337	NM_011347	Selp	Selectin, platelet
G01	Mm.45953	NM_011428	Snap25	Synaptosomal-associated protein 25
G02	Mm.290876	NM_013671	Sod2	Superoxide dismutase 2, mitochondrial
G03	Mm.277406	NM_009283	Stat1	Signal transducer and activator of transcription 1
G04	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G05	Mm.34064	NM_011489	Stat5b	Signal transducer and activator of transcription 5B
G06	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G07	Mm.235328	NM_011610	Tnfrsf1b	Tumor necrosis factor receptor superfamily, member 1b
G08	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G09	Mm.3399	NM_009422	Traf2	Tnf receptor-associated factor 2
G10	Mm.222	NM_011640	Trp53	Transformation related protein 53
G11	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G12	Mm.259879	NM_009688	Xiap	X-linked inhibitor of apoptosis
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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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