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

Human NFkB Signaling Targets

Cat. no. 330231 PAHS-225ZA

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 Human 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	AGT	AKT1	ALDH3A2	BCL2A1	BCL2L1	BIRC2	BIRC3	C3	CCL11	CCL2	CCL22
B	CCL5	CCND1	CCR5	CD40	CD69	CD80	CD83	CDKN1A	CFB	CSF1	CSF2	CSF2RB
C	CSF3	CXCL1	CXCL10	CXCL2	CXCL9	EGFR	EGR2	F3	F8	FAS	FASLG	GADD45B
D	ICAM1	IFNB1	IFNG	IL12B	IL15	IL1A	IL1B	IL1R2	IL1RN	IL2	IL2RA	IL4
E	IL6	IL8	INS	IRF1	LTA	LTB	MAP2K6	MMP9	MYC	MYD88	NCOA3	NFKB1
F	NFKB2	NFKBIA	NQO1	NR4A2	PDGFB	PLAU	PTGS2	REL	RELA	RELB	SELE	SELP
G	SNAP25	SOD2	STAT1	STAT3	STAT5B	TNF	TNFRSF1B	TNFSF10	TP53	TRAF2	VCAM1	XIAP
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.441047	NM_001124	ADM	Adrenomedullin
A02	Hs.19383	NM_000029	AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A03	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A04	Hs.499886	NM_000382	ALDH3A2	Aldehyde dehydrogenase 3 family, member A2
A05	Hs.227817	NM_004049	BCL2A1	BCL2-related protein A1
A06	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A07	Hs.696238	NM_001166	BIRC2	Baculoviral IAP repeat containing 2
A08	Hs.127799	NM_001165	BIRC3	Baculoviral IAP repeat containing 3
A09	Hs.529053	NM_000064	C3	Complement component 3
A10	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
A11	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A12	Hs.534347	NM_002990	CCL22	Chemokine (C-C motif) ligand 22
B01	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B02	Hs.523852	NM_053056	CCND1	Cyclin D1
B03	Hs.450802	NM_000579	CCR5	Chemokine (C-C motif) receptor 5
B04	Hs.472860	NM_001250	CD40	CD40 molecule, TNF receptor superfamily member 5
B05	Hs.208854	NM_001781	CD69	CD69 molecule
B06	Hs.838	NM_005191	CD80	CD80 molecule
B07	Hs.595133	NM_004233	CD83	CD83 molecule
B08	Hs.370771	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
B09	Hs.69771	NM_001710	CFB	Complement factor B
B10	Hs.591402	NM_000757	CSF1	Colony stimulating factor 1 (macrophage)
B11	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B12	Hs.592192	NM_000395	CSF2RB	Colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage)
C01	Hs.2233	NM_000759	CSF3	Colony stimulating factor 3 (granulocyte)
C02	Hs.789	NM_001511	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
C03	Hs.632586	NM_001565	CXCL10	Chemokine (C-X-C motif) ligand 10
C04	Hs.590921	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
C05	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
C06	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
C07	Hs.1395	NM_000399	EGR2	Early growth response 2
C08	Hs.62192	NM_001993	F3	Coagulation factor III (thromboplastin, tissue factor)
C09	Hs.654450	NM_000132	F8	Coagulation factor VIII, procoagulant component
C10	Hs.244139	NM_000043	FAS	Fas (TNF receptor superfamily, member 6)
C11	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
C12	Hs.110571	NM_015675	GADD45B	Growth arrest and DNA-damage-inducible, beta
D01	Hs.643447	NM_000201	ICAM1	Intercellular adhesion molecule 1
D02	Hs.93177	NM_002176	IFNB1	Interferon, beta 1, fibroblast
D03	Hs.856	NM_000619	IFNG	Interferon, gamma
D04	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
D05	Hs.654378	NM_000585	IL15	Interleukin 15
D06	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
D07	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
D08	Hs.25333	NM_004633	IL1R2	Interleukin 1 receptor, type II

Position	UniGene	GenBank	Symbol	Description
D09	Hs.81134	NM_000577	IL1RN	Interleukin 1 receptor antagonist
D10	Hs.89679	NM_000586	IL2	Interleukin 2
D11	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
D12	Hs.73917	NM_000589	IL4	Interleukin 4
E01	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
E02	Hs.624	NM_000584	IL8	Interleukin 8
E03	Hs.654579	NM_000207	INS	Insulin
E04	Hs.436061	NM_002198	IRF1	Interferon regulatory factor 1
E05	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
E06	Hs.376208	NM_002341	LTB	Lymphotoxin beta (TNF superfamily, member 3)
E07	Hs.463978	NM_002758	MAP2K6	Mitogen-activated protein kinase kinase 6
E08	Hs.297413	NM_004994	MMP9	Matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
E09	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
E10	Hs.82116	NM_002468	MYD88	Myeloid differentiation primary response gene (88)
E11	Hs.592142	NM_181659	NCOA3	Nuclear receptor coactivator 3
E12	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F01	Hs.73090	NM_002502	NFKB2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)
F02	Hs.81328	NM_020529	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F03	Hs.406515	NM_000903	NQO1	NAD(P)H dehydrogenase, quinone 1
F04	Hs.563344	NM_006186	NR4A2	Nuclear receptor subfamily 4, group A, member 2
F05	Hs.1976	NM_002608	PDGFB	Platelet-derived growth factor beta polypeptide
F06	Hs.77274	NM_002658	PLAU	Plasminogen activator, urokinase
F07	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F08	Hs.631886	NM_002908	REL	V-rel reticuloendotheliosis viral oncogene homolog (avian)
F09	Hs.502875	NM_021975	RELA	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
F10	Hs.654402	NM_006509	RELB	V-rel reticuloendotheliosis viral oncogene homolog B
F11	Hs.89546	NM_000450	SELE	Selectin E
F12	Hs.73800	NM_003005	SELP	Selectin P (granule membrane protein 140kDa, antigen CD62)
G01	Hs.167317	NM_003081	SNAP25	Synaptosomal-associated protein, 25kDa
G02	Hs.487046	NM_000636	SOD2	Superoxide dismutase 2, mitochondrial
G03	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
G04	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G05	Hs.595276	NM_012448	STAT5B	Signal transducer and activator of transcription 5B
G06	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G07	Hs.256278	NM_001066	TNFRSF1B	Tumor necrosis factor receptor superfamily, member 1B
G08	Hs.478275	NM_003810	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G09	Hs.654481	NM_000546	TP53	Tumor protein p53
G10	Hs.522506	NM_021138	TRAF2	TNF receptor-associated factor 2
G11	Hs.109225	NM_001078	VCAM1	Vascular cell adhesion molecule 1
G12	Hs.356076	NM_001167	XIAP	X-linked inhibitor of apoptosis
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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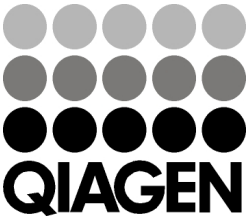

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