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

Human NFkB Signaling Pathway Plus

Cat. no. 330231 PAHS-025YA

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 Pathway Plus RT² Profiler PCR Array profiles the expression of 84 key genes related to NFκB-mediated signal transduction. It also determines whether canonical NFκB pathway activity is activated, repressed, or unchanged in experimental samples. 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. The array also includes 16 experimentally derived Signature Biomarker Genes which, along with classification algorithms, are used to generate the activity score. A set of controls present on each array enables data analysis using the ΔΔCT method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably determine canonical NFκB signaling pathway activity and 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	AGT	AKT1	ATF1	BCL2A1	BCL2L1	BCL3	BIRC2	CARD11	CASP1	CASP8	CCL2	CCL5
B	CD40	CFLAR	CHUK	CSF1	CSF2	CSF3	EGFR	EGR1	ELK1	FADD	FASLG	FOS
C	HMOX1	IFNA1	IFNG	IKBKB	IKBKG	IL10	IL1A	IL1B	IL1R1	IRAK1	IRAK2	JUN
D	LTA	LTBR	MALT1	MAP3K1	MYD88	NFKB2	NOD1	PSIP1	RAF1	REL	RELA	RELB
E	RHOA	RIPK1	STAT1	TBK1	TICAM1	TIMP1	TLR1	TLR2	TLR3	TLR4	TLR6	TLR9
F	TNFRSF10A	TNFRSF10B	TNFRSF1A	TNFSF10	TRADD	TRAF2	TRAF3	TRAF6	BIRC3	CCL20	CD83	CXCL2
G	CXCL3	ICAM1	IL8	IRF1	NFKB1	NFKBIA	NFKBIE	STX11	TIFA	TNF	TNFAIP2	TNFAIP3
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.19383	NM_000029	AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A02	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A03	Hs.648565	NM_005171	ATF1	Activating transcription factor 1
A04	Hs.227817	NM_004049	BCL2A1	BCL2-related protein A1
A05	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A06	Hs.31210	NM_005178	BCL3	B-cell CLL/lymphoma 3
A07	Hs.731943	NM_001166	BIRC2	Baculoviral IAP repeat containing 2
A08	Hs.648101	NM_032415	CARD11	Caspase recruitment domain family, member 11
A09	Hs.2490	NM_033292	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
A10	Hs.599762	NM_001228	CASP8	Caspase 8, apoptosis-related cysteine peptidase
A11	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A12	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B01	Hs.472860	NM_001250	CD40	CD40 molecule, TNF receptor superfamily member 5
B02	Hs.731912	NM_003879	CFLAR	CASP8 and FADD-like apoptosis regulator
B03	Hs.198998	NM_001278	CHUK	Conserved helix-loop-helix ubiquitous kinase
B04	Hs.173894	NM_000757	CSF1	Colony stimulating factor 1 (macrophage)
B05	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B06	Hs.2233	NM_000759	CSF3	Colony stimulating factor 3 (granulocyte)
B07	Hs.605083	NM_005228	EGFR	Epidermal growth factor receptor
B08	Hs.708393	NM_001964	EGR1	Early growth response 1
B09	Hs.715039	NM_005229	ELK1	ELK1, member of ETS oncogene family
B10	Hs.86131	NM_003824	FADD	Fas (TNFRSF6)-associated via death domain
B11	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
B12	Hs.25647	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
C01	Hs.517581	NM_002133	HMOX1	Heme oxygenase (decycling) 1
C02	Hs.37026	NM_024013	IFNA1	Interferon, alpha 1
C03	Hs.856	NM_000619	IFNG	Interferon, gamma
C04	Hs.597664	NM_001556	IKBKB	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta
C05	Hs.43505	NM_003639	IKBKG	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
C06	Hs.193717	NM_000572	IL10	Interleukin 10
C07	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
C08	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
C09	Hs.701982	NM_000877	IL1R1	Interleukin 1 receptor, type I
C10	Hs.522819	NM_001569	IRAK1	Interleukin-1 receptor-associated kinase 1
C11	Hs.449207	NM_001570	IRAK2	Interleukin-1 receptor-associated kinase 2
C12	Hs.696684	NM_002228	JUN	Jun proto-oncogene
D01	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
D02	Hs.1116	NM_002342	LTBR	Lymphotoxin beta receptor (TNFR superfamily, member 3)
D03	Hs.601217	NM_173844	MALT1	Mucosa associated lymphoid tissue lymphoma translocation gene 1
D04	Hs.653654	NM_005921	MAP3K1	Mitogen-activated protein kinase kinase kinase 1
D05	Hs.82116	NM_002468	MYD88	Myeloid differentiation primary response gene (88)
D06	Hs.73090	NM_002502	NFKB2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)
D07	Hs.405153	NM_006092	NOD1	Nucleotide-binding oligomerization domain containing 1
D08	Hs.658434	NM_021144	PSIP1	PC4 and SFRS1 interacting protein 1
D09	Hs.159130	NM_002880	RAF1	V-raf-1 murine leukemia viral oncogene homolog 1

Position	UniGene	GenBank	Symbol	Description
D10	Hs.631886	NM_002908	REL	V-rel reticuloendotheliosis viral oncogene homolog (avian)
D11	Hs.502875	NM_021975	RELA	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
D12	Hs.654402	NM_006509	RELB	V-rel reticuloendotheliosis viral oncogene homolog B
E01	Hs.247077	NM_001664	RHOA	Ras homolog gene family, member A
E02	Hs.519842	NM_003804	RIPK1	Receptor (TNFRSF)-interacting serine-threonine kinase 1
E03	Hs.743244	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
E04	Hs.505874	NM_013254	TBK1	TANK-binding kinase 1
E05	Hs.29344	NM_182919	TICAM1	Toll-like receptor adaptor molecule 1
E06	Hs.522632	NM_003254	TIMP1	TIMP metallopeptidase inhibitor 1
E07	Hs.621817	NM_003263	TLR1	Toll-like receptor 1
E08	Hs.519033	NM_003264	TLR2	Toll-like receptor 2
E09	Hs.657724	NM_003265	TLR3	Toll-like receptor 3
E10	Hs.174312	NM_138554	TLR4	Toll-like receptor 4
E11	Hs.743572	NM_006068	TLR6	Toll-like receptor 6
E12	Hs.87968	NM_017442	TLR9	Toll-like receptor 9
F01	Hs.213467	NM_003844	TNFRSF10A	Tumor necrosis factor receptor superfamily, member 10a
F02	Hs.521456	NM_003842	TNFRSF10B	Tumor necrosis factor receptor superfamily, member 10b
F03	Hs.279594	NM_001065	TNFRSF1A	Tumor necrosis factor receptor superfamily, member 1A
F04	Hs.478275	NM_003810	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
F05	Hs.460996	NM_003789	TRADD	TNFRSF1A-associated via death domain
F06	Hs.522506	NM_021138	TRAF2	TNF receptor-associated factor 2
F07	Hs.510528	NM_003300	TRAF3	TNF receptor-associated factor 3
F08	Hs.444172	NM_004620	TRAF6	TNF receptor-associated factor 6
F09	Hs.127799	NM_001165	BIRC3	Baculoviral IAP repeat containing 3
F10	Hs.75498	NM_004591	CCL20	Chemokine (C-C motif) ligand 20
F11	Hs.595133	NM_004233	CD83	CD83 molecule
F12	Hs.75765	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
G01	Hs.89690	NM_002090	CXCL3	Chemokine (C-X-C motif) ligand 3
G02	Hs.643447	NM_000201	ICAM1	Intercellular adhesion molecule 1
G03	Hs.624	NM_000584	IL8	Interleukin 8
G04	Hs.436061	NM_002198	IRF1	Interferon regulatory factor 1
G05	Hs.618430	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
G06	Hs.81328	NM_020529	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
G07	Hs.458276	NM_004556	NFKBIE	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon
G08	Hs.118958	NM_003764	STX11	Syntaxin 11
G09	Hs.310640	NM_052864	TIFA	TRAF-interacting protein with forkhead-associated domain
G10	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G11	Hs.736562	NM_006291	TNFAIP2	Tumor necrosis factor, alpha-induced protein 2
G12	Hs.211600	NM_006290	TNFAIP3	Tumor necrosis factor, alpha-induced protein 3
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.544577	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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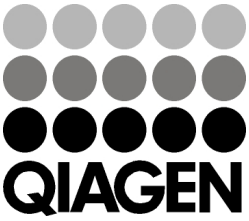

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