# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## **Mouse TNF Signaling Pathway**

Cat. no. 330231 PAMM-063ZA

#### For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> 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 <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



#### **Description**

The Mouse TNF Signaling Pathway RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes whose expression is controlled by or involved in the TNF ligand and TNF receptor signaling pathways. Members of the TNF Superfamily and TNF Receptor Superfamily are represented on this array. Genes involved in the TNFR1 and TNFR2 Signaling Pathways are also included. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the TNF signaling with this array.

For further details, consult the RT<sup>2</sup> Profiler PCR Array Handbook.

#### Shipping and storage

RT<sup>2</sup> 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. RT<sup>2</sup> 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 RT<sup>2</sup> 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  $RT^2$  Profiler PCR Array Handbook for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
А	Apaf1	Arhgdib	Bag4	Bcl2	Bid	Cad	Casp2	Casp3	Casp8	Cd27	Cd40	Cd40lg
В	Cd70	Cflar	Chuk	Cradd	Cycs	Dffa	Dusp1	Eda2r	Fadd	Fas	Fasl	lkbkb
С	Ikbkg	Jun	Lmna	Lmnb1	Lmnb2	Lta	Ltb	Ltbr	Map2k4	Map3k1	Map3k14	Map3k7
D	Mapk8	Nfkb1	Nfkbia	Ngfr	Pak1	Pak2	Parp1	Pglyrp1	Prkdc	Psmg2	Rb1	Relt
Е	Spna2	Tank	Tnf	Tnfaip3	Tnfrsf10b	Tnfrsf11a	Tnfrsf11b	Tnfrsf12a	Tnfrsf13b	Tnfrsf13c	Tnfrsf14	Tnfrsf17
F	Tnfrsf18	Tnfrsf19	Tnfrsf1a	Tnfrsf1b	Tnfrsf21	Tnfrsf25	Tnfrsf4	Tnfrsf8	Tnfrsf9	Tnfsf10	Tnfsf11	Tnfsf12
G	Tnfsf13	Tnfsf13b	Tnfsf14	Tnfsf15	Tnfsf18	Tnfsf4	Tnfsf8	Tnfsf9	Tradd	Traf1	Traf2	Traf3
н	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

### Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.220289	NM_009684	Apaf1	Apoptotic peptidase activating factor 1
A02	Mm.2241	NM_007486	Arhgdib	Rho, GDP dissociation inhibitor (GDI) beta
A03	Mm.118400	NM_026121	Bag4	BCL2-associated athanogene 4
A04	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A05	Mm.235081	NM_007544	Bid	BH3 interacting domain death agonist
A06	Mm.305535	NM_023525	Cad	Carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
A07	Mm.3921	NM 007610	Casp2	Caspase 2
A08	Mm.34405	NM 009810	Casp3	Caspase 3
A09	Mm.336851	NM 009812	Casp8	Caspase 8
A10	Mm.367714	NM 001033126	Cd27	CD27 antigen
A11	Mm.271833	NM 011611	Cd40	CD40 antigen
A12	Mm.4861	NM 011616	Cd40lg	CD40 ligand
B01	Mm.42228	NM 011617	Cd70	CD70 antigen
B02	Mm.336848	NM 009805	Cflar	CASP8 and FADD-like apoptosis regulator
B03	Mm.3996	NM 007700	Chuk	Conserved helix-loop-helix ubiquitous kinase
B03	Mm.218009	NM 009950	Cradd	CASP2 and RIPK1 domain containing adaptor with death domain
B05	Mm.35389	NM 007808	Cycs	
B05			Dffa	Cytochrome c, somatic
B07	Mm.41433 Mm.239041	NM_010044		DNA fragmentation factor, alpha subunit
		NM_013642	Dusp1	Dual specificity phosphatase 1
B08	Mm.189270	NM_175540	Eda2r	Ectodysplasin A2 receptor
B09	Mm.5126	NM_010175	Fadd	Fas (TNFRSF6)-associated via death domain
B10	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member 6)
B11	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
B12	Mm.277886	NM_010546	Ikbkb	Inhibitor of kappaB kinase beta
C01	Mm.12967	NM_010547	Ikbkg	Inhibitor of kappaB kinase gamma
C02	Mm.275071	NM_010591	Jun	Jun oncogene
C03	Mm.243014	NM_019390	Lmna	Lamin A
C04	Mm.4105	NM_010721	Lmnb1	Lamin B1
C05	Mm.7362	NM_010722	Lmnb2	Lamin B2
C06	Mm.87787	NM_010735	Lta	Lymphotoxin A
C07	Mm.1715	NM_008518	Ltb	Lymphotoxin B
C08	Mm.3122	NM_010736	Ltbr	Lymphotoxin B receptor
C09	Mm.412922	NM_009157	Map2k4	Mitogen-activated protein kinase kinase 4
C10	Mm.15918	NM_011945	Map3k1	Mitogen-activated protein kinase kinase 1
C11	Mm.158981	NM 016896	Map3k14	Mitogen-activated protein kinase kinase kinase 14
C12	Mm.258589	NM 172688	Map3k7	Mitogen-activated protein kinase kinase 7
D01	Mm.21495	NM 016700	Mapk8	Mitogen-activated protein kinase 8
D02	Mm.256765	NM 008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
D03	Mm.170515	NM_010907	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
	11 000000	NM 033217	Ngfr	Nerve growth factor receptor (TNFR superfamily, member 16)
D04	Mm.283893			
D04	Mm.283893 Mm.260227			
D04 D05 D06	Mm.283893 Mm.260227 Mm.234204	NM_011035 NM_177326	Pak1 Pak2	P21 protein (Cdc42/Rac)-activated kinase 1 P21 protein (Cdc42/Rac)-activated kinase 2

Position	UniGene	GenBank	Symbol	Description
D08	Mm.21855	NM_009402	Pglyrp1	Peptidoglycan recognition protein 1
D09	Mm.71	NM 011159	Prkdc	Protein kinase, DNA activated, catalytic polypeptide
D10	Mm.150701	NM 134138	Psmg2	Proteasome (prosome, macropain) assembly chaperone 2
D11	Mm.273862	NM 009029	Rb1	Retinoblastoma 1
D12	Mm.40336	NM 177073	Relt	RELT tumor necrosis factor receptor
E01	Mm.204969	NM 001076554	Spna2	Spectrin alpha 2
E02	Mm.244393	NM 011529	Tank	TRAF family member-associated Nf-kappa B activator
E03	Mm.1293	NM 013693	Tnf	Tumor necrosis factor
E04	Mm.116683	NM 009397	Tnfaip3	Tumor necrosis factor, alpha-induced protein 3
E05	Mm.193430	NM 020275	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b
E06	Mm.6251	NM 009399	Tnfrsf11a	Tumor necrosis factor receptor superfamily, member 11a
E07	Mm.15383	NM 008764	Tnfrsf11b	Tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)
E08	Mm.28518	NM 013749	Tnfrsf12a	Tumor necrosis factor receptor superfamily, member 12a
E09	Mm.265915	NM 021349	Tnfrsf13b	Tumor necrosis factor receptor superfamily, member 13b
E10	Mm.240047	NM 028075	Tnfrsf13c	Tumor necrosis factor receptor superfamily, member 13c
LIO	74111.240047	1411_020073	1111131100	Tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry
E11	Mm.215147	NM_178931	Tnfrsf14	mediator)
E12	Mm.12935	NM 011608	Tnfrsf17	Tumor necrosis factor receptor superfamily, member 17
F01	Mm.482508	NM 009400	Tnfrsf18	Tumor necrosis factor receptor superfamily, member 18
F02	Mm.281356	NM 013869	Tnfrsf19	Tumor necrosis factor receptor superfamily, member 19
F03	Mm.1258	NM 011609	Tnfrsf1a	Tumor necrosis factor receptor superfamily, member 1a
F04	Mm.235328	NM 011610	Tnfrsf1b	Tumor necrosis factor receptor superfamily, member 1b
F05	Mm.200792	NM 178589	Tnfrsf21	Tumor necrosis factor receptor superfamily, member 11
F06	Mm.101198	NM 033042	Tnfrsf25	Tumor necrosis factor receptor superfamily, member 25
F07	Mm.13885	NM 011659	Tnfrsf4	1 1 /
F08	Mm.12810	NM 009401	Tnfrsf8	Tumor necrosis factor receptor superfamily, member 4 Tumor necrosis factor receptor superfamily, member 8
F09	Mm.244187	NM 011612	Tnfrsf9	Tumor necrosis factor receptor superfamily, member 9
F10	Mm.1062	NM 009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
F11	Mm.249221	NM 011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 10  Tumor necrosis factor (ligand) superfamily, member 11
F12	Mm.344820	NM 011614	Tnfsf12	Tumor necrosis factor (ligand) superfamily, member 11  Tumor necrosis factor (ligand) superfamily, member 12
G01	Mm.8983		Tnfsf12	
G01 G02	Mm.28835	NM_023517 NM 033622	Tnfsf13b	Tumor necrosis factor (ligand) superfamily, member 13
G02 G03	Mm.28835 Mm.483369	NM_033622 NM 019418	Tnfsf13b	Tumor necrosis factor (ligand) superfamily, member 13b
G03 G04		_	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14
	Mm.208152	NM_177371		Tumor necrosis factor (ligand) superfamily, member 15
G05 G06	Mm.276823 Mm.4994	NM_183391	Tnfsf18 Tnfsf4	Tumor necrosis factor (ligand) superfamily, member 18
		NM_009452		Tumor necrosis factor (ligand) superfamily, member 4
G07	Mm.4664	NM_009403	Tnfsf8	Tumor necrosis factor (ligand) superfamily, member 8
G08	Mm.41171	NM_009404	Tnfsf9	Tumor necrosis factor (ligand) superfamily, member 9
G09	Mm.264255	NM_001033161	Tradd	TNFRSF1A-associated via death domain
G10	Mm.239514	NM_009421	Traf1	Tnf receptor-associated factor 1
G11	Mm.3399	NM_009422	Traf2	Tnf receptor-associated factor 2
G12	Mm.27431	NM_011632	Traf3	Tnf receptor-associated factor 3
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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT2 SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> 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 <sup>2</sup> SYBR Green ROX <sup>™</sup> 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 <sup>2</sup> 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

<sup>\*</sup> Larger kit sizes available; please inquire.

RT<sup>2</sup> 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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