

# RT<sup>2</sup> Profiler™ PCR Array: Mouse Common Cytokines

**Catalog Number**

PAMM-021A

PAMM-021C

PAMM-021D

PAMM-021E

PAMM-021F

PAMM-021G

**For Real-Time Instruments:**

ABI Standard Blocks; Bio-Rad iCycler, MyiQ, and (MJ Research) Chromo 4; and Stratagene Mx3005p, Mx3000p

ABI 7500 and 7900HT FAST 96-Well Blocks, ABI StepOnePlus

Bio-Rad (MJ Research) Opticon and Opticon 2, Stratagene Mx4000

ABI 7900HT 384-Well Block

Roche LightCycler 480 96-well Block

Roche LightCycler 480 384-well Block

**Description**

The Mouse Common Cytokines RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 important cytokine genes. This array includes interferons and interleukins as well as the bone morphogenetic proteins (BMP) and members of the TGF- $\beta$  family. Also represented are colony-stimulating factors and various growth factors (fibroblast, insulin-like, platelet-derived, transforming, and vascular endothelial). Tumor necrosis factors are included as well as other cytokine-related genes. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cytokines with this array.

**Functional Gene Groupings****Interferons:** Ifna2, Ifna4, Ifnb, Ifng.**Interleukins:** Il10, Il11, Il12b, Il13, Il15, Il16, Il17b, Il17c, Il25 (Il17e), Il17f, Il18, Il19, Il1a, Il1b, Il1f10, Il1f5, Il1f6, Il1f8, Il1f9, Il1rn, Il2, Il20, Il21, Il24, Il27, Il3, Il4, Il7, Il9, Txlna (Il14).**Bone Morphogenic Proteins (BMPs) and TGF- $\beta$  Family:** Bmp1, Bmp10, Bmp2, Bmp3, Bmp4, Bmp5, Bmp6, Bmp7, Bmp8b, Gdf1, Gdf10, Gdf11, Gdf15, Gdf2, Gdf3, Gdf5, Gdf8, Gdf9, Inha, Inhba.**TNF Superfamily:** Fasl (Tnfsf6), Lta, Ltb, Tnf, Tnfrsf11b, Tnfsf10, Tnfsf11, Tnfsf12, Tnfsf13, Tnfsf13b, Tnfsf14, Tnfsf15, Tnfsf18, Tnfsf4, Cd40lg (Tnfsf5), Cd70 (Tnfsf7), Tnfsf8, Tnfsf9.**Other Growth Factors/Cytokines:** Csf1, Csf2, Ctf1, Ctf2, Fbs1, Fgf10, Flt3l, Lefty1 (Leftb), Lif, Mif, Scgb3a1, Scye1.**Storage Conditions**

Please check the kit components immediately after you receive this package. We are only responsible for missing items reported within two (2) business days of receipt.

**Storage Conditions:** PCR Arrays are shipped at ambient temperature. Keep plates at -20 °C for long-term storage.**NOTE:** Be sure that you have the correct PCR Array format for your instrument before starting the experiment.

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## **References**

1. Callard R, Gearing A (1998). *The Cytokine Facts Book*, Academic Press.
2. Oppenheim JJ, Feldmann M (2000) *Cytokine References*.
3. Richard A, Kaempfer R (2000). *Cytokines Revisited at Hilton Head Cytokine and Growth Factor Reviews 11*: 255-266.
4. Peter J. Delves and Ivan M. Roitt (1998) *Encyclopedia of Immunology*, 2<sup>nd</sup> Edition, Academic Press.
5. Jacqueline Parkin and Byrony Cohen (2001) An overview of the immune system, *The Lancet* **357**: 1777-89.
6. Angus Thomson (1998) *Cytokine Handbook*, 3<sup>rd</sup> edition, Academic Press.
7. Anthony Mire-Sluis and Robin Thorpe (1998) *Cytokines*, Academic Press.

## Product Specification Sheet

### Array Layout: Mouse Common Cytokines PCR Array

	1	2	3	4	5	6	7	8	9	10	11	12
A	Bmp1	Bmp10	Bmp2	Bmp3	Bmp4	Bmp5	Bmp6	Bmp7	Bmp8b	Csf1	Csf2	Ctf1
B	Ctf2	Fasl	Fbs1	Fgf10	Flt3l	Gdf1	Gdf10	Gdf11	Gdf15	Gdf2	Gdf3	Gdf5
C	Gdf8	Gdf9	Ifna2	Ifna4	Ifnb1	Ifng	Il10	Il11	Il12b	Il13	Il15	Il16
D	Il17b	Il17c	Il25	Il17f	Il18	Il19	Il1a	Il1b	Il1f10	Il1f5	Il1f6	Il1f8
E	Il1f9	Il1rn	Il2	Il20	Il21	Il24	Il27	Il3	Il4	Il7	Il9	Inha
F	Inhba	Lefty1	Lif	Lta	Ltb	Mif	Scgb3a1	Scye1	Tnf	Tnfrsf11b	Tnfsf10	Tnfsf11
G	Tnfsf12	Tnfsf13	Tnfsf13b	Tnfsf14	Tnfsf15	Tnfsf18	Tnfsf4	Cd40lg	Cd70	Tnfsf8	Tnfsf9	Txna
H	Gusb	Hprt1	Hsp90ab1	Gapdh	Actb	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

### Gene Table

Position	UniGene	GenBank	Symbol	Description
A01	Mm.27757	NM_009755	Bmp1	Bone morphogenetic protein 1
A02	Mm.57171	NM_009756	Bmp10	Bone morphogenetic protein 10
A03	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
A04	Mm.209571	NM_173404	Bmp3	Bone morphogenetic protein 3
A05	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
A06	Mm.118034	NM_007555	Bmp5	Bone morphogenetic protein 5
A07	Mm.374781	NM_007556	Bmp6	Bone morphogenetic protein 6
A08	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
A09	Mm.30413	NM_007559	Bmp8b	Bone morphogenetic protein 8b
A10	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
A11	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
A12	Mm.389954	NM_007795	Ctf1	Cardiotrophin 1
B01	Mm.298017	NM_198858	Ctf2	Cardiotrophin 2
B02	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
B03	Mm.323505	XM_284344	Fbs1	Fibrosin 1
B04	Mm.317323	NM_008002	Fgf10	Fibroblast growth factor 10
B05	Mm.1658	NM_013520	Flt3l	FMS-like tyrosine kinase 3 ligand
B06	Mm.258280	NM_008107	Gdf1	Growth differentiation factor 1
B07	Mm.432071	NM_145741	Gdf10	Growth differentiation factor 10
B08	Mm.299218	XM_125935	Gdf11	Growth differentiation factor 11
B09	Mm.31325	NM_011819	Gdf15	Growth differentiation factor 15
B10	Mm.422844	NM_019506	Gdf2	Growth differentiation factor 2
B11	Mm.299742	NM_008108	Gdf3	Growth differentiation factor 3
B12	Mm.4744	NM_008109	Gdf5	Growth differentiation factor 5
C01	Mm.3514	NM_010834	Gdf8	Growth differentiation factor 8
C02	Mm.9714	NM_008110	Gdf9	Growth differentiation factor 9
C03	Mm.14091	NM_010503	Ifna2	Interferon alpha 2
C04	Mm.377088	NM_010504	Ifna4	Interferon alpha 4
C05	Mm.1245	NM_010510	Ifnb1	Interferon beta 1, fibroblast
C06	Mm.240327	NM_008337	Ifng	Interferon gamma
C07	Mm.874	NM_010548	Il10	Interleukin 10
C08	Mm.35814	NM_008350	Il11	Interleukin 11
C09	Mm.239707	NM_008352	Il12b	Interleukin 12B
C10	Mm.1284	NM_008355	Il13	Interleukin 13
C11	Mm.4392	NM_008357	Il15	Interleukin 15
C12	Mm.10137	NM_010551	Il16	Interleukin 16
D01	Mm.59313	NM_019508	Il17b	Interleukin 17B
D02	Mm.222808	NM_145834	Il17c	Interleukin 17C
D03	Mm.90154	NM_080729	Il25	Interleukin 25

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Position	UniGene	GenBank	Symbol	Description
D04	Mm.222807	NM_145856	Il17f	Interleukin 17F
D05	Mm.1410	NM_008360	Il18	Interleukin 18
D06	Mm.131480	NM_001009940	Il19	Interleukin 19
D07	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
D08	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
D09	Mm.218750	NM_153077	Il1f10	Interleukin 1 family, member 10
D10	Mm.29261	NM_019451	Il1f5	Interleukin 1 family, member 5 (delta)
D11	Mm.133095	NM_019450	Il1f6	Interleukin 1 family, member 6
D12	Mm.45901	XM_130058	Il1f8	Interleukin 1 family, member 8
E01	Mm.249379	NM_153511	Il1f9	Interleukin 1 family, member 9
E02	Mm.882	NM_031167	Il1rn	Interleukin 1 receptor antagonist
E03	Mm.14190	NM_008366	Il2	Interleukin 2
E04	Mm.103794	NM_021380	Il20	Interleukin 20
E05	Mm.157689	NM_021782	Il21	Interleukin 21
E06	Mm.196691	NM_053095	Il24	Interleukin 24
E07	Mm.222632	NM_145636	Il27	Interleukin 27
E08	Mm.983	NM_010556	Il3	Interleukin 3
E09	Mm.276360	NM_021283	Il4	Interleukin 4
E10	Mm.3825	NM_008371	Il7	Interleukin 7
E11	Mm.3006	NM_008373	Il9	Interleukin 9
E12	Mm.1100	NM_010564	Inha	Inhibin alpha
F01	Mm.8042	NM_008380	Inhba	Inhibin beta-A
F02	Mm.378911	NM_010094	Lefty1	Left right determination factor 1
F03	Mm.4964	NM_008501	Lif	Leukemia inhibitory factor
F04	Mm.87787	NM_010735	Lta	Lymphotoxin A
F05	Mm.1715	NM_008518	Ltb	Lymphotoxin B
F06	Mm.2326	NM_010798	Mif	Macrophage migration inhibitory factor
F07	Mm.22802	NM_170727	Scgb3a1	Secretoglobin, family 3A, member 1
F08	Mm.235137	NM_007926	Scye1	Small inducible cytokine subfamily E, member 1
F09	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
F10	Mm.15383	NM_008764	Tnfrsf11b	Tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)
F11	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
F12	Mm.249221	NM_011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G01	Mm.344820	NM_011614	Tnfsf12	Tumor necrosis factor (ligand) superfamily, member 12
G02	Mm.8983	NM_023517	Tnfsf13	Tumor necrosis factor (ligand) superfamily, member 13
G03	Mm.28835	NM_033622	Tnfsf13b	Tumor necrosis factor (ligand) superfamily, member 13b
G04	Mm.307668	NM_019418	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14
G05	Mm.208152	NM_177371	Tnfsf15	Tumor necrosis factor (ligand) superfamily, member 15
G06	Mm.276823	NM_183391	Tnfsf18	Tumor necrosis factor (ligand) superfamily, member 18
G07	Mm.4994	NM_009452	Tnfsf4	Tumor necrosis factor (ligand) superfamily, member 4
G08	Mm.4861	NM_011616	Cd40lg	CD40 ligand
G09	Mm.42228	NM_011617	Cd70	CD70 antigen
G10	Mm.4664	NM_009403	Tnfsf8	Tumor necrosis factor (ligand) superfamily, member 8
G11	Mm.41171	NM_009404	Tnfsf9	Tumor necrosis factor (ligand) superfamily, member 9
G12	Mm.268863	NM_001005506	Txlna	Taxilin alpha
H01	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H02	Mm.299381	NM_013556	Hprt1	Hypoxanthine guanine phosphoribosyl transferase 1
H03	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90kDa alpha (cytosolic), class B member 1
H04	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H05	Mm.328431	NM_007393	Actb	Actin, beta, cytoplasmic
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