

## TaqMan® Human and Rat Inflammation Arrays

These arrays are part of a collection of TaqMan® Gene Signature Arrays that enable analysis of hundreds of TaqMan® Gene Expression Assays on a micro fluidic card with minimal effort.

Inflammation is the body's response to infection, irritation or injury; characterized by redness, heat, swelling, pain and possible dysfunction of the organs involved. It can be defined as an innate immune response manifested by increased blood supply and vascular permeability. This allows fluid and white blood cells to leave the intravascular compartment and move to the site of injury or infection.

Inflammation is associated with a wide range of disorders including asthma, allergy, rheumatoid arthritis, gout, sepsis, autoimmune disease, cardiovascular disease, diabetes, neurologic disease and cancer. Medications targeting inflammatory diseases include NSAIDS, corticosteroids, H1-receptor antagonists and  $\beta$ 2-selective adrenergic drugs. Current treatments tend to have limited efficacy because they target symptoms or impair the immune response. An increasing number of new drugs and protein therapies are being developed. TaqMan Gene Signature Arrays for human and rat inflammation contain over 90 genes that are, or have been, studied as targets for a range of inflammatory diseases.

Group	Assays	Human Gene Symbols
Channels	7	
L-type calcium	5	CACNA1C, CACNA1D, CACNA2D1, CACNB2, CACNB4
Ligand gated	2	HTR3A, HTR3B
Enzymes and inhibitors	41	
Inhibitor	1	A2M
Lipase	15	CES1, PLA2G1B, PLA2G2A, PLA2G5, PLCB2-4, PLCD1, PLCG1, PLCG2, PLA2G7, PLA2G10, PLA2G4C, PLA2G2D, PLCE1
Kinase	4	MAPK1, MAPK3, MAPK8, MAPK14
Nitric oxide synthase	1	NOS2A
Phosphodiesterase	4	PDE4A-D
Prostaglandin metabolism	9	ALOX12, ALOX5, HPGD, LTA4H, LTC4S, PTGIS, PTGS1 (COX1), PTGS2 (COX2), TBXAS1
Protease	7	KLK3, CASP1, KLK1, KLK2, KLKB1, KLK14, KLK15
Factors	9	ANXA1, ANXA3, ANXA5, TNFSF5, IL13, KNG1, NFKB1, TNFSF13B, TNF
Receptors	35	
GPCR	18	ADRB1, ADRB2, BDKRB1, BDKRB2, CYSLTR1, HRH1-3, LTB4R, LTB4R2, MC2R (missing on rat array), PTAFR, PTGDR, PTGER2, PTGER3, PTGFR, PTGIR, TBXA2R
IL receptor family	7	IL1R1, IL2RA, IL2RB, IL2RG, IL1R2, IL1RL1, IL1RAPL2
Adhesion molecule	6	ICAM1, ITGAL, ITGAM, ITGB1, ITGB2, VCAM1
TNF receptor	3	TRFRSF5, TNFRSF1A, TNFRSF1B
Nuclear receptor	1	NR3C1 (GR)
Controls	4	18S, ACTB, B2M, GAPDH (B2M is replaced by Ppia in the rat array)

Gene Signature Array Name	# of Targets/Controls	Format	Pack Size	Part Number
Human Inflammation Array	92/4	Format 96a	4 arrays/pack	4378707
Rat Inflammation Array	91/5	Format 96a	4 arrays/pack	4378708

### Human Inflammation Array

	A2M	ADRB1	ADRB2	ALOX12	ALOX5	ANXA1	ANXA3	ANXA5	KLK3	BDKRB1	18S	BDKRB2	CACNA1C	CACNA1D	CACNA2D1	CACNB2	CACNB4	CASP1	CD40	CD40LG	CES1	LTB4R	MAPK14	NR3C1	
A	HPGD	HRH1	HRH2	HTR3A	ICAM1	IL1R1	IL2RA	IL2RB	IL2RG	IL13	ITGAL	ITGAM	ITGB1	ITGB2	KLK1	KLK2	KLKB1	KNG1	LTA4H	LTC4S	MC2R	NFKB1	NOS2A	PDE4A	
B	PDE4B	PDE4C	PDE4D	PLA2G1B	PLA2G2A	PLA2G5	PLCB2	PLCB3	PLCB4	PLCD1	PLCG1	PLCG2	MAPK1	MAPK3	MAPK8	PTAFR	PTGDR	PTGER2	PTGER3	PTGFR	PTGIR	PTGIS	PTGS1	PTGS2	
C	TBXA2R	TBXAS1	TNF	TNFRSF1A	TNFRSF1B	VCAM1	IL1R2	PLA2G7	PLA2G10	PLA2G4C	IL1RL1	HTR3B	TNFSF13B	CYSLTR1	HRH3	PLA2G2D	IL1RAPL2	KLK14	PLCE1	KLK15	LTB4R2	ACTB	B2M	GAPDH	
D	A2M	ADRB1	ADRB2	ALOX12	ALOX5	ANXA1	ANXA3	ANXA5	KLK3	BDKRB1	18S	BDKRB2	CACNA1C	CACNA1D	CACNA2D1	CACNB2	CACNB4	CASP1	CD40	CD40LG	CES1	LTB4R	MAPK14	NR3C1	
E	HPGD	HRH1	HRH2	HTR3A	ICAM1	IL1R1	IL2RA	IL2RB	IL2RG	IL13	ITGAL	ITGAM	ITGB1	ITGB2	KLK1	KLK2	KLKB1	KNG1	LTA4H	LTC4S	MC2R	NFKB1	NOS2A	PDE4A	
F	PDE4B	PDE4C	PDE4D	PLA2G1B	PLA2G2A	PLA2G5	PLCB2	PLCB3	PLCB4	PLCD1	PLCG1	PLCG2	MAPK1	MAPK3	MAPK8	PTAFR	PTGDR	PTGER2	PTGER3	PTGFR	PTGIR	PTGIS	PTGS1	PTGS2	
G	TBXA2R	TBXAS1	TNF	TNFRSF1A	TNFRSF1B	VCAM1	IL1R2	PLA2G7	PLA2G10	PLA2G4C	IL1RL1	HTR3B	TNFSF13B	CYSLTR1	HRH3	PLA2G2D	IL1RAPL2	KLK14	PLCE1	KLK15	LTB4R2	ACTB	B2M	GAPDH	
H	A2M	ADRB1	ADRB2	ALOX12	ALOX5	ANXA1	ANXA3	ANXA5	KLK3	BDKRB1	18S	BDKRB2	CACNA1C	CACNA1D	CACNA2D1	CACNB2	CACNB4	CASP1	CD40	CD40LG	CES1	LTB4R	MAPK14	NR3C1	
I	HPGD	HRH1	HRH2	HTR3A	ICAM1	IL1R1	IL2RA	IL2RB	IL2RG	IL13	ITGAL	ITGAM	ITGB1	ITGB2	KLK1	KLK2	KLKB1	KNG1	LTA4H	LTC4S	MC2R	NFKB1	NOS2A	PDE4A	
J	PDE4B	PDE4C	PDE4D	PLA2G1B	PLA2G2A	PLA2G5	PLCB2	PLCB3	PLCB4	PLCD1	PLCG1	PLCG2	MAPK1	MAPK3	MAPK8	PTAFR	PTGDR	PTGER2	PTGER3	PTGFR	PTGIR	PTGIS	PTGS1	PTGS2	
K	TBXA2R	TBXAS1	TNF	TNFRSF1A	TNFRSF1B	VCAM1	IL1R2	PLA2G7	PLA2G10	PLA2G4C	IL1RL1	HTR3B	TNFSF13B	CYSLTR1	HRH3	PLA2G2D	IL1RAPL2	KLK14	PLCE1	KLK15	LTB4R2	ACTB	B2M	GAPDH	
L	A2M	ADRB1	ADRB2	ALOX12	ALOX5	ANXA1	ANXA3	ANXA5	KLK3	BDKRB1	18S	BDKRB2	CACNA1C	CACNA1D	CACNA2D1	CACNB2	CACNB4	CASP1	CD40	CD40LG	CES1	LTB4R	MAPK14	NR3C1	
M	HPGD	HRH1	HRH2	HTR3A	ICAM1	IL1R1	IL2RA	IL2RB	IL2RG	IL13	ITGAL	ITGAM	ITGB1	ITGB2	KLK1	KLK2	KLKB1	KNG1	LTA4H	LTC4S	MC2R	NFKB1	NOS2A	PDE4A	
N	PDE4B	PDE4C	PDE4D	PLA2G1B	PLA2G2A	PLA2G5	PLCB2	PLCB3	PLCB4	PLCD1	PLCG1	PLCG2	MAPK1	MAPK3	MAPK8	PTAFR	PTGDR	PTGER2	PTGER3	PTGFR	PTGIR	PTGIS	PTGS1	PTGS2	
O	TBXA2R	TBXAS1	TNF	TNFRSF1A	TNFRSF1B	VCAM1	IL1R2	PLA2G7	PLA2G10	PLA2G4C	IL1RL1	HTR3B	TNFSF13B	CYSLTR1	HRH3	PLA2G2D	IL1RAPL2	KLK14	PLCE1	KLK15	LTB4R2	ACTB	B2M	GAPDH	
P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

### Rat Inflammation Array

	A2m	Adrb2	Cacna1c	Nr3c1	Hrh1	Itgb1	Klk7	Ngfg	Nos2	Pde4b	18S	Pde4d	Ptcd1	Ptgs1	Tbxa2r	Tnf	Ton	Tbxas1	Kng1	Adrb1	Ptger3	Itgam	Ptcb4	Klkb1	
A	Casp1	Bdkrb2	Alox5	Anxa3	Vcam1	Anxa1	Cacna2d1	Hrh2	Icam1	Ptgis	Il1r1	Tnfrsf1a	Pde4a	Ptgr	Il1r1	Anxa5	Il2ra	Ptcb1	Il2rb	Ces1	Ptcb3	Ptcb2	Pla2g5	Pla2g10	
B	Pla2g1b	Ptgs2	Pla2g2a	Cacna1d	Mapk3	Cacnb4	Ptfr	Htr3b	Ltb4r	Ptgr	Hpgd	Htr3a	Bdkrb1	Mapk14	Nfkb1	Ptger2	Cd40lg	Ptcb2	Hrh3	Ltc4s	Ltb4r2	Cysltr1	Ptce1	Il13	
C	Mapk8	Mapk1	Cacnb2	Il1r2	Il2rg	Tnfrsf1b	Tnfrsf5	Alox12	Dpde1	Pla2g4c	Ptgr	Klk15	Pla2g2d	Lta4h	Il1rapl2	Pla2g7	Klk14	Itgal	Itgb2	RGD1561519	Actb	Arbp	Gapdh	Ppia	
D	A2m	Adrb2	Cacna1c	Nr3c1	Hrh1	Itgb1	Klk7	Ngfg	Nos2	Pde4b	18S	Pde4d	Ptcd1	Ptgs1	Tbxa2r	Tnf	Ton	Tbxas1	Kng1	Adrb1	Ptger3	Itgam	Ptcb4	Klkb1	
E	Casp1	Bdkrb2	Alox5	Anxa3	Vcam1	Anxa1	Cacna2d1	Hrh2	Icam1	Ptgis	Il1r1	Tnfrsf1a	Pde4a	Ptgr	Il1r1	Anxa5	Il2ra	Ptcb1	Il2rb	Ces1	Ptcb3	Ptcb2	Pla2g5	Pla2g10	
F	Pla2g1b	Ptgs2	Pla2g2a	Cacna1d	Mapk3	Cacnb4	Ptfr	Htr3b	Ltb4r	Ptgr	Hpgd	Htr3a	Bdkrb1	Mapk14	Nfkb1	Ptger2	Cd40lg	Ptcb2	Hrh3	Ltc4s	Ltb4r2	Cysltr1	Ptce1	Il13	
G	Mapk8	Mapk1	Cacnb2	Il1r2	Il2rg	Tnfrsf1b	Tnfrsf5	Alox12	Dpde1	Pla2g4c	Ptgr	Klk15	Pla2g2d	Lta4h	Il1rapl2	Pla2g7	Klk14	Itgal	Itgb2	RGD1561519	Actb	Arbp	Gapdh	Ppia	
H	A2m	Adrb2	Cacna1c	Nr3c1	Hrh1	Itgb1	Klk7	Ngfg	Nos2	Pde4b	18S	Pde4d	Ptcd1	Ptgs1	Tbxa2r	Tnf	Ton	Tbxas1	Kng1	Adrb1	Ptger3	Itgam	Ptcb4	Klkb1	
I	Casp1	Bdkrb2	Alox5	Anxa3	Vcam1	Anxa1	Cacna2d1	Hrh2	Icam1	Ptgis	Il1r1	Tnfrsf1a	Pde4a	Ptgr	Il1r1	Anxa5	Il2ra	Ptcb1	Il2rb	Ces1	Ptcb3	Ptcb2	Pla2g5	Pla2g10	
J	Pla2g1b	Ptgs2	Pla2g2a	Cacna1d	Mapk3	Cacnb4	Ptfr	Htr3b	Ltb4r	Ptgr	Hpgd	Htr3a	Bdkrb1	Mapk14	Nfkb1	Ptger2	Cd40lg	Ptcb2	Hrh3	Ltc4s	Ltb4r2	Cysltr1	Ptce1	Il13	
K	Mapk8	Mapk1	Cacnb2	Il1r2	Il2rg	Tnfrsf1b	Tnfrsf5	Alox12	Dpde1	Pla2g4c	Ptgr	Klk15	Pla2g2d	Lta4h	Il1rapl2	Pla2g7	Klk14	Itgal	Itgb2	RGD1561519	Actb	Arbp	Gapdh	Ppia	
L	A2m	Adrb2	Cacna1c	Nr3c1	Hrh1	Itgb1	Klk7	Ngfg	Nos2	Pde4b	18S	Pde4d	Ptcd1	Ptgs1	Tbxa2r	Tnf	Ton	Tbxas1	Kng1	Adrb1	Ptger3	Itgam	Ptcb4	Klkb1	
M	Casp1	Bdkrb2	Alox5	Anxa3	Vcam1	Anxa1	Cacna2d1	Hrh2	Icam1	Ptgis	Il1r1	Tnfrsf1a	Pde4a	Ptgr	Il1r1	Anxa5	Il2ra	Ptcb1	Il2rb	Ces1	Ptcb3	Ptcb2	Pla2g5	Pla2g10	
N	Pla2g1b	Ptgs2	Pla2g2a	Cacna1d	Mapk3	Cacnb4	Ptfr	Htr3b	Ltb4r	Ptgr	Hpgd	Htr3a	Bdkrb1	Mapk14	Nfkb1	Ptger2	Cd40lg	Ptcb2	Hrh3	Ltc4s	Ltb4r2	Cysltr1	Ptce1	Il13	
O	Mapk8	Mapk1	Cacnb2	Il1r2	Il2rg	Tnfrsf1b	Tnfrsf5	Alox12	Dpde1	Pla2g4c	Ptgr	Klk15	Pla2g2d	Lta4h	Il1rapl2	Pla2g7	Klk14	Itgal	Itgb2	RGD1561519	Actb	Arbp	Gapdh	Ppia	
P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

More arrays will be available soon! Register to receive new Gene Signature Array product announcements, or suggest an array at [taqmanarray.appliedbiosystems.com](http://taqmanarray.appliedbiosystems.com)

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The TaqMan® Array is covered by U.S. Patents Nos. 6,514,750, 6,942,837, 7,211,443, and 7,235,406. Micro Fluidic Card developed in collaboration with 3M Company.

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