

# Serum Biomarker Assays from Meso Scale Discovery

MSD's list of assays for biomarkers in serum, plasma, and complex matrices is expanding. In addition to our cytokine and chemokine target menu, we have assays for growth factors and cardiac, metabolic, fertility and vascular markers available in singleplex and multiplex formats. These assays are rapid, efficient, and sensitive, saving both time and sample volume. Visit [www.mesoscale.com](http://www.mesoscale.com) for a complete list of available assays.

## Cytokines and Chemokines

Human	Mouse	Rat
Eotaxin	GM-CSF	GM-CSF
Eotaxin-3	IFN- $\gamma$	IFN- $\gamma$
GM-CSF	IL-1 $\beta$	IL-1 $\alpha$
IFN- $\beta$	IL-2	IL-1 $\beta$
IFN- $\gamma$	IL-4	IL-4
IL-1 $\beta$	IL-5	IL-5
IL-2	IL-6	IL-6
IL-4	IL-10	IL-13
IL-5	IL-12	KC/GRO/CINC
IL-6	IL-12p40	(CXCL1)
IL-6R	IL-12p70	MIP-3 $\alpha$
IL-8	KC/GRO/CINC	TNF- $\alpha$
IL-10	(CXCL1)	
IL-12	MCP-1	
IL-12p40	RANTES	
IL-12p70	TNF- $\alpha$	
IL-13	TNF-RI	
IL-17	TNF-RII	
IP-10		
MCP-1		
MCP-4		
MDC		
MIP-1 $\alpha$		
MIP-1 $\beta$		
MIP-3 $\alpha$		
RANTES		
TARC		
TNF- $\alpha$		
TNF-RI		
TNF-RII		

## Cytokine Multiplex Panels

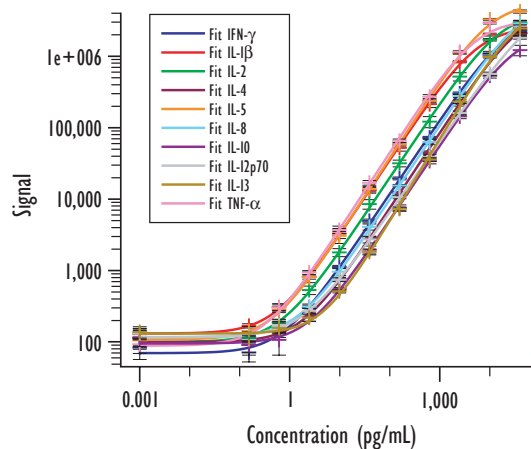
- Human TH1/TH2 7-Plex
- Human TH1/TH2 10-Plex
- Mouse TH1/TH2 9-Plex
- Human Pro-Inflammatory 4-Plex I
- Human Pro-Inflammatory 4-Plex II
- Human Pro-Inflammatory 7-Plex
- Human Pro-Inflammatory 9-Plex
- Mouse Pro-Inflammatory 7-Plex
- Human Chemokine 9-Plex
- Human Demonstration 4-Plex
- Human Demonstration 7-Plex
- Human Demonstration 10-Plex
- Rat Demonstration 7-Plex

## Fertility Markers

- FSH (Human)
- LH (Human)
- Progesterone (Human)

For research use only; not for use in diagnostic or therapeutic procedures.

## Human TH1/TH2 Panel: Ultrasensitive Cytokine Assays for Human Serum & Plasma



## Performance

Detection Parameters (pg/mL)		IFN- $\gamma$	IL-1 $\beta$	IL-2	IL-4	IL-5	IL-8	IL-10	IL-12p70	IL-13	TNF- $\alpha$
LLOD		0.3	0.5	0.4	1.1	0.1	0.4	1.2	0.7	3.3	0.2
LLOQ		0.4	1.0	1.3	3.2	0.1	0.7	1.9	1.6	2.6	0.4
Percent Recovery (%)		87	109	105	101	104	103	82	119	86	125
Endogenous Levels (pg/mL)		0.7 - 3.2	0.2 - 1.1	0.8 - 5.0	2.0 - 9.7	0.3 - 1.5	3.2 - 30	1.4 - 20	1.2 - 11.5	4.5 - 42	1.8 - 5.2

Purified cytokines were spiked into human serum at multiple levels, and the recovery of the spiked cytokine was measured in triplicate using the Human TH1/TH2 10-plex Ultra-Sensitive Kit. The table above summarizes the average calculated recoveries, detection parameters, and endogenous cytokine levels measured in eight individual sera. Lower limit of detection (LLOD) is calculated using 2.5 standard deviations above the background. Lower limit of quantification (LLOQ) is defined as the lowest concentration at which the CV of the concentration is less than 20% and the recovery of spiked calibrator is within 20% of the expected value.

## Metabolic Markers

- Adiponectin (Mouse)
- GLP-1 (Human, Mouse, Rat)
- Insulin (Mouse, Rat)
- Leptin (Mouse)
- Resistin (Mouse, Rat)

## Cardiac Markers

- CRP (Human)
- MPO (Human)
- Troponin-T (Human)
- Troponin-I (Human)
- CKMB (Human)
- Myoglobin (Human)

## Vascular Markers & Growth Factors

- Thrombomodulin (Human)
- ICAM-3 (Human)
- E-Selectin (Human)
- P-Selectin (Human)
- SAA (Human)
- CRP (Human)
- VCAM-1 (Human)
- ICAM-1 (Human)
- VEGF (Human)

