

MSD[®] Mouse IL-23 Kit

For quantitative determination in human serum, plasma, and tissue culture supernatants

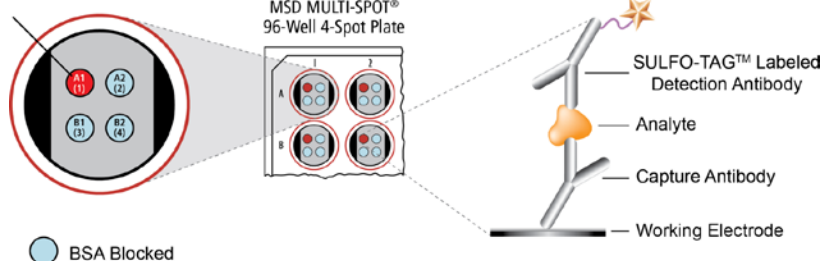


Alzheimer's Disease
BioProcess
Cardiac
Cell Signaling
Clinical Immunology
Cytokines
Growth Factors
Hypoxia
Immunogenicity
Inflammation
Metabolic
Oncology
Toxicology
Vascular

Catalog Numbers

Mouse IL-23 Kit	
Kit size	
1 plate	K152LKD-1
5 plates	K152LKD-2
25 plates	K152LKD-4

mIL-23



Interleukin-23 (IL-23) is a heterodimeric cytokine that is structurally and functionally related to IL-12. Both share the 40 kDa (p40) subunit of IL-12, and this forms a disulfide link with a 19 kDa (p19) subunit to make the active IL-23 molecule. IL-23 is produced by activated macrophages and dendritic cells in response to certain bacterial and viral pathogens and may play a key role in sustaining inflammatory responses that link innate and adaptive immunity.²

The main role of IL-23 involves the differentiation of TH17 cells, a novel subset of CD4⁺ memory T cells, and their stimulation to produce the cytokine, IL-17. IL-17 enhances T cell priming and stimulates the production of additional proinflammatory cytokines such as IL-1, IL-6, TNF- α , and chemokines, thus sustaining the ongoing inflammatory response.³ Elevated levels of IL-23 and IL-17 have been consistently observed in autoimmune diseases such as rheumatoid arthritis, inflammatory bowel disease, and diabetes. Chronic over-expression of IL-23 may also play a role in angiogenesis and increased tumor growth and is often lethal in several mouse models of chronic inflammatory disease.^{2,3} Taken together, these actions suggest that IL-23 is a key player in sustaining cellular immunity by promoting the survival and effector cytokine production of TH1 memory cells.

The MSD Mouse IL-23 assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

Assay Sensitivity

	IL-23
LLOD (pg/mL)	0.78

The lower limit of detection (LLOD) is a calculated concentration based on a .signal 2.5 standard deviations above the background (zero calibrator blank).

Ordering information

MSD Customer Service
Phone: 1-301-947-2085
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

Company Address

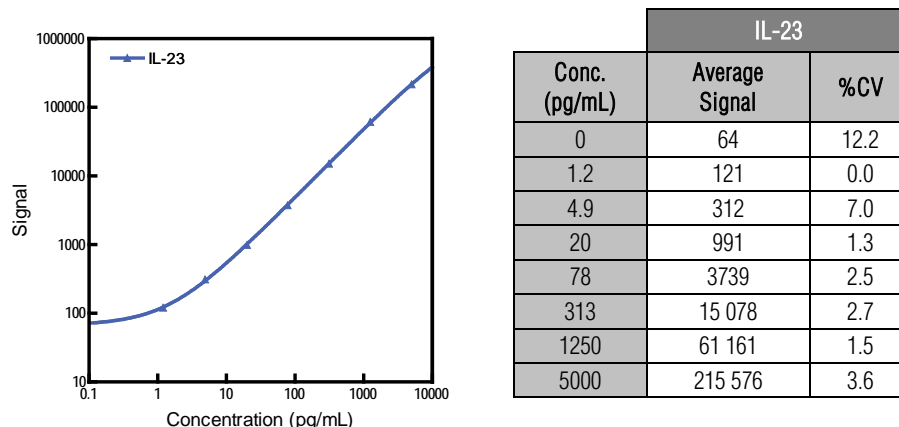
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Typical Standard Curve

The following standard curve is an example of the wide dynamic range of the Mouse IL-23 assay.



MSD Cytokine Assays

MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well without compromising speed or performance
- **Large dynamic range:** Linear range of up to five logs enables the measurement of native levels of biomarkers in normal and diseased samples without multiple dilutions
- **Minimal background:** The stimulation mechanism (electricity) is decoupled from the signal (light)
- **Simple protocols:** Only labels near the electrode surface are detected, enabling no-wash assays
- **Flexibility:** Labels are stable, non-radioactive, and conveniently conjugated to biological molecules
- **High sensitivity and precision:** Multiple excitation cycles of each label enhance light levels and improve sensitivity

For a complete list of products, please visit our website at www.mesoscale.com.

References

1. Langrish CL, et al. IL-12 and IL-23: master regulators of innate and adaptive immunity. *Immunol Rev.* 2004 Dec;202:96-105.
2. Kunz M, Ibrahim SM. Cytokines and cytokine profiles in human autoimmune diseases and animal models of autoimmunity. *Mediators Inflamm.* 2009:979258.
3. Langrish CL, et al. IL-23 drives a pathogenic T cell population that induces autoimmune inflammation. *J Exp Med.* 2005 Jan 17;201(2):233-40.

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