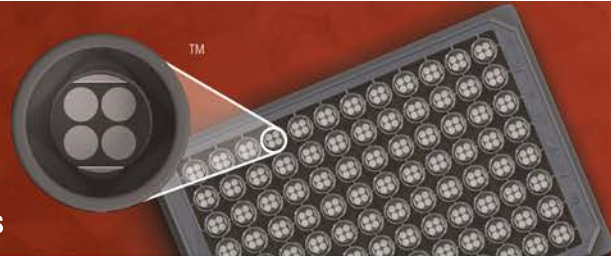


MSD[®] Human Fractalkine Kit

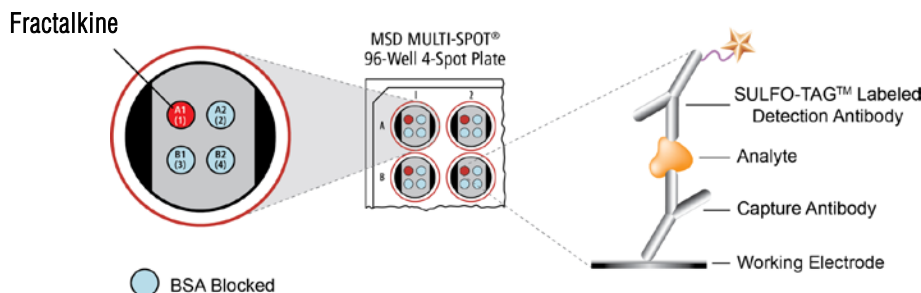
For quantitative determination in human serum, plasma, and tissue culture supernatants



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

Catalog Numbers

Human Fractalkine Kit	
Kit size	
1 plate	K151MKD-1
5 plates	K151MKD-2
25 plates	K151MKD-4



Fractalkine (CX3CL1) is a multi-functional, transmembrane protein with an extracellular, chemokine domain that sits atop a mucin-like stalk which aids in the binding of certain immune cells. The transmembrane form can be proteolytically processed to generate a secreted 90 kDa soluble form.¹ Soluble fractalkine has been observed in serum, urine, CSF, and synovial fluids. The soluble form acts as a chemoattractant for monocytes, natural killer (NK) cells, and lymphocytes. Fractalkine is thought to mediate interactions between neurons and microglia in the brain, and protects the brain against reactive oxygen species during neuroinflammation.²

The membrane-bound form is predominantly expressed on vascular endothelium, smooth muscle, neurons and epithelial linings of the intestine, bronchi, and renal proximal tubules. At these surfaces, TNF- α , IFN- γ , and IL-1 promote increased fractalkine expression and subsequent adhesion of leukocytes and extracellular matrix proteins to the inflamed endothelial cells.¹⁻³ Thus, fractalkine is involved in the pathogenesis of various clinical disease states or processes, such as atherosclerosis, glomerulonephritis, renal and cardiac allograft rejection, and rheumatoid arthritis.²⁻⁴

The MSD Human Fractalkine assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

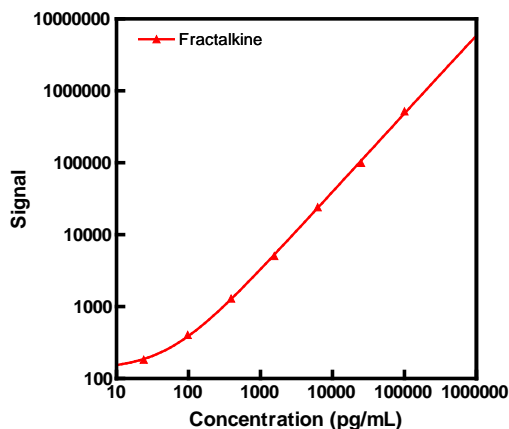
Assay Sensitivity

Fractalkine	
LLOD (pg/mL)	16

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

Typical Standard Curve

The following standard curve is an example of the wide dynamic range of the Human Fractalkine assay.



Fractalkine		
Conc. (pg/mL)	Average Signal	%CV
0	112	4.4
24	183	3.5
98	405	3.1
390	1295	1.4
1560	5057	4.1
6250	24 039	7.5
25 000	99 715	12.6
100 000	517 917	1.1

Ordering information

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

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Gaithersburg, MD 20877 USA

www.mesoscale.com[®]

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Not for use in diagnostic procedures.

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

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4. Jones BA, Beamer M, Ahmed S. Fractalkine/CX3CL1: a potential new target for inflammatory diseases. *Mol Interv.* 2010 Oct;10(5):263-70.

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