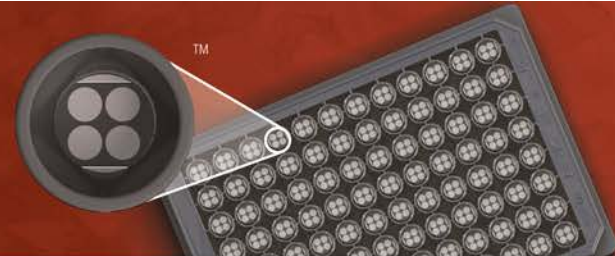


# MSD<sup>®</sup> Human KIM-1 Kit

For quantitative determination in human urine



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

## Catalog Numbers

Human KIM-1 Kit	
Kit size	
1 plate	K151JHD-1
5 plates	K151JHD-2
25 plates	K151JHD-4

## Ordering information

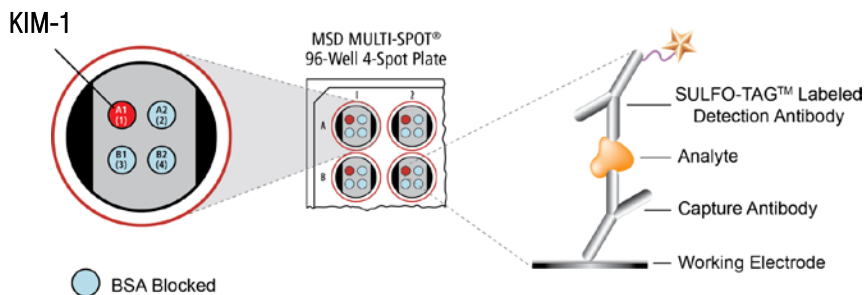
MSD Customer Service  
Phone: 1-301-947-2085  
Fax: 1-301-990-2776  
Email: CustomerService@mesoscale.com

## Company Address

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[www.mesoscale.com](http://www.mesoscale.com)<sup>®</sup>

For Research Use Only.  
Not for use in diagnostic  
procedures.



**Kidney injury molecule-1 (KIM-1)** (also known as TIM-1 and HAVCR) is a type 1 transmembrane glycoprotein found on activated CD4+ T cells, especially Th2 cells, and dedifferentiated proximal tubule epithelial cells.<sup>1</sup> In humans, the 85 kD, mucin-rich extracellular region of this molecule is shed and detected at elevated levels in urine, serum, and plasma following drug toxicity or ischemic damage to the kidney. However, KIM-1 levels are very low or undetected in normal samples. KIM-1 is a suitable renal biomarker capable of early detection and progressive monitoring of acute kidney injury beyond traditional injury markers such as serum creatinine (SCr) and blood urea nitrogen (BUN) which lack specificity and sensitivity.<sup>1-3</sup> In addition, KIM-1 has also been implicated in the development of atopic airway disease (asthma) and Th2-biased autoimmune responses.<sup>4</sup>

The MSD Human KIM-1 assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

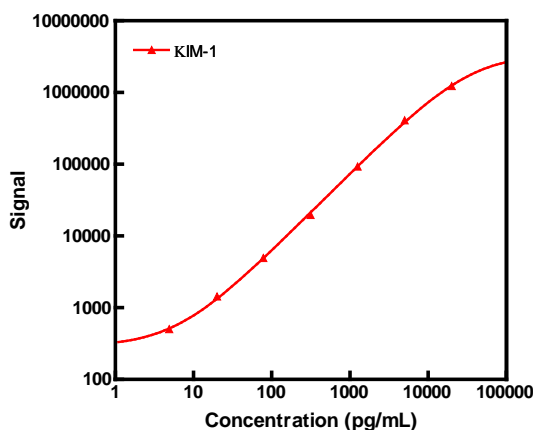
## Assay Sensitivity

	KIM-1
Average LLOD (pg/mL)	0.89
LLOD Range (pg/mL)	0.39 – 3.1

The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the background. LLOD was calculated based on 28 experimental tests.

## Typical Standard Curve

The following standard curve is an example of the wide dynamic range of the Human KIM-1 assay.



Conc. (pg/mL)	KIM-1	
	Average Signal	% CV
0	206	5.8
4.9	503	6.4
20	1431	6.1
78	4921	3.0
313	19 683	2.5
1250	92 751	1.6
5000	410 164	1.7
20 000	1 232 579	3.1

# MSD Toxicology 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](http://www.mesoscale.com).

## References

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3. Chiusolo A, Defazio R, Zanetti E, Mongillo M, Mori N, Cristofori P, Trevisan A. Kidney injury molecule-1 expression in rat proximal tubule after treatment with segment-specific nephrotoxicants: a tool for early screening of potential kidney toxicity. *Toxicol Pathol.* 2010;38(3):338-45.
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