

MSD[®] Human YKL-40 Kit

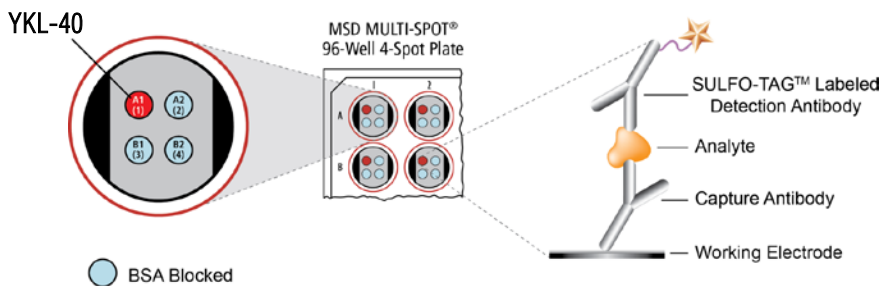
For quantitative determination in human serum, and plasma



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

Catalog Numbers

Human YKL-40 Kit	
Kit size	
1 plate	K151NHD-1
5 plates	K151NHD-2
25 plates	K151NHD-4



YKL-40 (also known as human cartilage glycoprotein 39; HC-gp39) is a 40 kDa inflammatory glycoprotein involved in the activation of the innate immune system and extracellular matrix remodeling. YKL-40 is secreted by macrophages, neutrophils, chondrocytes, vascular smooth muscle, and hepatic stellate cells.¹ Elevated serum YKL-levels are associated with the presence and extent of coronary artery disease (CAD) and even higher YKL-40 levels have been documented in patients with myocardial infarction and both type 1 and type 2 diabetes.^{1,2} Enhanced expression of YKL-40 is observed in macrophages and smooth muscle cells in atherosclerotic plaques. In endothelial dysfunction, elevated YKL-40 levels seem to be involved in cell migration, reorganization, and tissue remodeling in response to endothelial damage.^{2,3} Therefore, YKL-40 may play a role in multiple pathogenic processes related to inflammation, extracellular tissue remodeling, fibrosis, and the metastatic and angiogenic invasiveness of many solid tumors.²⁻⁴

The MSD Human YKL-40 assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

Assay Sensitivity

YKL-40
LLOD (pg/mL)
0.49

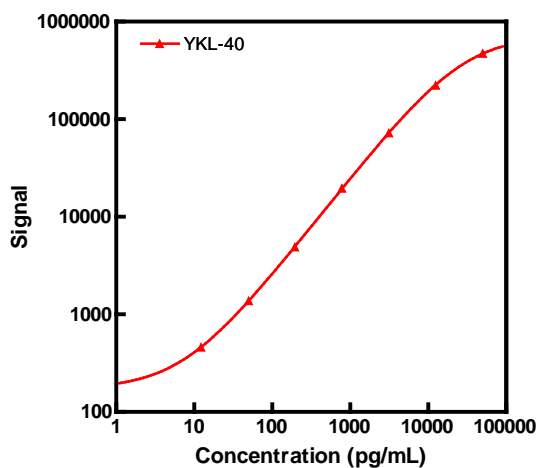
The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the background (zero calibrator blank).

Ordering information

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

Typical Standard Curve

The following standard curve is an example of the wide dynamic range of the Human YKL-40 assay.



Conc. (pg/mL)	YKL-40	
	Average Signal	%CV
0	158	2.9
12.2	461	5.7
50	1375	5.1
195	4891	7.0
781	19 563	6.2
3125	72 104	5.5
12 500	223 288	4.8
50 000	471 375	3.4

Company Address

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Not for use in diagnostic procedures.



MSD Inflammation Assays

MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well using typical sample volumes of 25 μ L or less 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 response (light signal), minimizing matrix interference
- **Simple protocols:** Only labels bound near the electrode surface are excited, enabling assays with fewer washes
- **Flexibility:** Labels are stable, non-radioactive, and conveniently conjugated to biological molecules
- **High sensitivity and precision:** Multiple rounds of label excitation and emission enhance light levels and improve sensitivity

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

References

1. Roslind A, Johansen JS. YKL-40: a novel marker shared by chronic inflammation and oncogenic transformation. *Methods Mol Biol.* 2009;511:159-84.
2. Rathcke CN, Vestergaard H. YKL-40, a new inflammatory marker with relation to insulin resistance and with a role in endothelial dysfunction and atherosclerosis. *Inflamm Res.* 2006 Jun;55(6):221-7.
3. Rathcke CN, Vestergaard H. YKL-40--an emerging biomarker in cardiovascular disease and diabetes. *Cardiovasc Diabetol.* 2009 Nov 23;8:61.
4. Johansen JS, et al. Serum YKL-40, a new prognostic biomarker in cancer patients? *Cancer Epidemiol Biomarkers Prev.* 2006 Feb;15(2):194-202.

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