

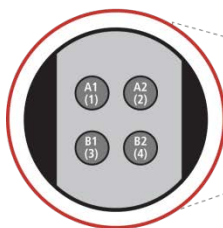
# MSD® Human FABP3 Kit

For quantitative determination in human serum and plasma

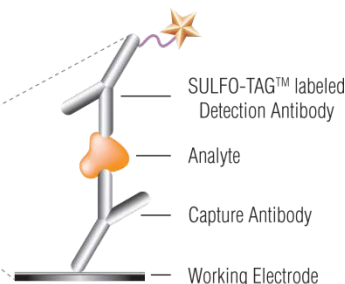
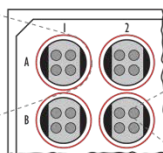


Alzheimer's Disease  
BioProcess  
Cardiac  
Cell Signaling  
Clinical Immunology  
Cytokines  
Growth Factors  
Hypoxia  
Immunogenicity  
Inflammation  
Metabolic  
Oncology  
**Toxicology**  
Vascular

1. **FABP3**
2. *BSA blocked*
3. *BSA blocked*
4. *BSA blocked*



MSD MULTI-SPOT®  
96-Well 4-Spot Plate



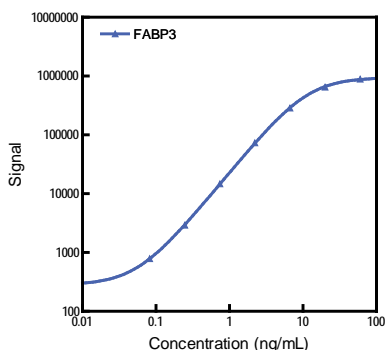
Fatty acid-binding proteins (FABPs) are members of a superfamily of lipid-binding proteins that facilitate fatty acid transport, cell growth and differentiation, cellular signaling, gene transcription, cyto-protection, and programmed cell death.<sup>1</sup> FABP3, or heart-type cytoplasmic FABP (hFABP), is a 14.5 kDa protein that facilitates intracellular transport of long-chain fatty acids (LCFA) into muscle cells. By non-covalent binding, FABP3 increases LCFA concentration in the aqueous cytoplasm and facilitates diffusion from membranes to mitochondria for oxidation.<sup>2</sup> FABP3 also increases myocyte glucose uptake through AMPK activation.<sup>3</sup> FABP3-facilitated lipid accumulation and unregulated glucose uptake may contribute to fat deposition in myocytes and concomitant insulin resistance and apoptosis. Elevated levels of circulating FABP3 have been closely associated with acute coronary syndrome, acute myocardial damage, cardiac abnormalities, stroke, and obstructive sleep disorder.<sup>4,5</sup> FABP3 may also serve as a prognostic indicator of myocardial infarction.<sup>6</sup> Representative data from the assay is presented below. Visit [www.mesoscale.com](http://www.mesoscale.com) for a complete listing of our products.

## Catalog Numbers

Human FABP3 Kit	
Kit Size	Catalog #
1 plate	K151HTD-1
5 plates	K151HTD-2
25 plates	K151HTD-4

## Assay Sensitivity

The following standard curves illustrate the dynamic range of the Human FABP3 assay.



FABP3	
Average LLOD (ng/mL)	0.103
LLOD Range (ng/mL)	0.0952–0.107

The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the background (zero calibrator blank). The LLOD shown above was calculated based on 4 runs.

## Ordering Information

MSD Customer Service  
Phone: 1-301-947-2085  
Fax: 1-301-990-2776  
Email: [CustomerService@mesoscale.com](mailto:CustomerService@mesoscale.com)

## Company Address

MESO SCALE DISCOVERY®  
A division of  
Meso Scale Diagnostics, LLC.  
1601 Research Boulevard  
Rockville, MD 20850 USA

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

## MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well using typical sample volumes of 25 µL 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 Research Use Only.  
Not for use in diagnostic procedures.

For a complete list of products, please visit our website at [www.mesoscale.com](http://www.mesoscale.com).

# MSD Toxicology Assays

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## References

1. Zimmerman AW, Veerkamp JH. New insights into the structure and function of fatty acid-binding proteins. *Cell Mol Life Sci.* 2002 Jul;59(7):1096-116.
2. Glatz JF, et al. Cytoplasmic fatty acid-binding protein facilitates fatty acid utilization by skeletal muscle. *Acta Physiol Scand.* 2003 Aug;178(4):367-71.
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4. Petzold T, et al. Heart-type fatty acid binding protein (hFABP) in the diagnosis of myocardial damage in coronary artery bypass grafting. *Eur J Cardiothorac Surg.* 2001 Jun;19(6):859-64.
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6. Karbek B, et al. Heart-type fatty acid binding protein (H-FABP): relationship with arterial intima-media thickness and role as diagnostic marker for atherosclerosis in patients with impaired glucose metabolism. *Cardiovasc Diabetol.* 2011 May 2;10:37.

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