

DESCRIPTION

Source	<i>E. coli</i> -derived			
	Met	HHHHHH	GS	Mouse FABP5/E-FABP (Met1-Gln135) Accession # Q05816
	N-terminus			C-terminus

N-terminal Sequence Met

Analysis

Predicted Molecular Mass 16 kDa

Mass

SPECIFICATIONS


SDS-PAGE	16 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in NaPO ₄ , NaCl and Tween®-20. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 400 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity not tested



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R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

BACKGROUND

Fatty acid binding proteins (FABP) are small cytoplasmic lipid binding proteins that are expressed in a tissue specific manner and are involved in intracellular lipid transport. All FABPs bind free fatty acids, cholesterol, and retinoids, which differ in their selectivity, affinity and binding mechanism (1). Circulating FABP levels are used as indicators of tissue damage. Some FABP polymorphisms have been associated with disorders of lipid metabolism and the development of atherosclerosis (2). FABPs are structurally conserved, consisting of a water-filled, ligand-binding pocket surrounded by ten anti-parallel beta-barrel structures, capped by an N-terminal helix-turn-helix motif. The helical N-terminus is involved in the regulation of FA transfer from membranes (3). FABP5, also known as epidermal fatty acid binding protein (E-FABP), is highly expressed in epidermal cells, but also in a plethora of other tissues, including mammary gland, brain, liver, kidney, lung, adipocytes, macrophages, tongue and testis (1). It is associated with keratinocytes and adipocytes and is suggested to promote fatty acid availability to enzymes, protect cell structures from fatty acid attack, and target fatty acids to nuclear transcription factors. The amino acid sequence of human FABP5 is 80%, 81% and 92% identical to that of mouse, rat and bovine FABP5, respectively (4).

References:

1. Smathers, R. *et al.* (2011) *Hum. Genomics*. **5**:170.
2. Furuhashi, M. *et al.* (2008) *Nat. Rev. Drug Discov.* **7**:489.
3. Storch, J. *et al.* (2010) *J. Biol. Chem.* **285**:32679.
4. Bleck, B. *et al.* (1998) *Gene* **215**:123.