



LD Biopharma, Inc.
7384 Trade Street, Suite B
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Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human FABP4 Protein
Catalog Number: hRP-1981
Manufacturer: LD Biopharma, Inc.

Introduction

The fatty-acid-binding proteins (FABPs) are a family of transport proteins for fatty acids and other lipophilic substances such as eicosanoids and retinoids. These proteins are thought to facilitate the transfer of fatty acids between extra- and intracellular membranes. Some family members are also believed to transport lipophilic molecules from outer cell membrane to certain intracellular receptors such as PPAR. Levels of fatty-acid-binding protein have been shown to decline with ageing in the mouse brain, possibly contributing to age-associated decline in synaptic activity. FABP4 protein is dominantly expressed in adipocytes, as lipid transport protein. It binds both long chain fatty acids and retinoic acid. FABP4 delivers long-chain fatty acids and retinoic acid to their cognate receptors in the nucleus.

Full-length of human FABP4 cDNA (131aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (31aa) fusion at its N-terminal. It was expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: FABP4 (A-FABP; ALBP; aP2; HEL-S-104)
Accession Number: NP_001433.1
Species: Human
Size: 50 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Alqahtani MF, et al., *Evaluation of New Diagnostic Biomarkers in Pediatric Sepsis: Matrix Metalloproteinase-9, Tissue Inhibitor of Metalloproteinase-1, Mid-Regional Pro-Atrial Natriuretic Peptide, and Adipocyte Fatty-Acid Binding Protein*. PLoS ONE 11 (4), E0153645



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Zhang S, et al., *Circulating Adipocyte Fatty Acid Binding Protein (FABP4) Levels Are Associated with Irisin in the Middle-Aged General Chinese Population*. PLoS ONE 11 (1), E0146605 (2016)

Saavedra P, et al., *New insights into circulating FABP4: Interaction with cytokeratin 1 on endothelial cell membranes*. Biochim. Biophys. Acta 1853 (11 PT A), 2966-2974 (2015)

Reiser H, et al., *Circulating FABP4 is a prognostic biomarker in patients with acute coronary syndrome but not in asymptomatic individuals*. Arterioscler. Thromb. Vasc. Biol. 35 (8), 1872-1879 (2015)

Applications

1. May be used for in vitro FABP4 mediated long-chain fatty acid metabolism regulation study for adipocytes by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping protein-protein interaction.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for cardiovascular diseases diagnostic applications.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGRHHHHHGNLYFQGGFCDAFVGTWKLVSSENFDDYMKEVGVGFATRQVAGM
AKPNMII SVNGDVITIKSESTFKNTEISFILGQEFDEVTADDRKVKSTITLDGGVLVHVQKWDG
KSTTIKRKREDDKLVVECVMKGVTSTRVYERA