



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Fatty Acid Binding Protein-4

Catalog No.
228-10426

Source:
Escherichia Coli.

Synonyms

Fatty acid-binding protein adipocyte, AFABP, Fatty acid-binding protein 4, Adipocyte lipid-binding protein, ALBP, A-FABP, FABP4.

Introduction

Adipocyte fatty acid binding protein FABP4 is a 15 kDa member of the intracellular fatty acid binding protein (FABP) family, which is known for the ability to bind fatty acids and related compounds (bile acids or retinoids) in an internal cavity. FABP4 is expressed in a differentiation-dependent fashion in adipocytes and is a critical gene in the regulation of the biological function of these cells. In mice, targeted mutations in FABP4 provide significant protection from hyperinsulinemia and insulin resistance in the context of both dietary and genetic obesity. Adipocytes obtained from FABP4-deficient mice also have reduced efficiency of lipolysis in vitro and in vivo, and these mice exhibited moderately improved systemic dyslipidemia. Recent studies also demonstrated FABP4 expression in macrophages upon differentiation and activation. In these cells, FABP4 modulates inflammatory responses and cholesterol ester accumulation, and total or macrophage-specific FABP4 deficiency confers dramatic protection against atherosclerosis in the apoE^{-/-} mice. These results indicate a central role for FABP4 in the development of major components of the metabolic syndrome through its distinct actions in adipocytes and macrophages.

Description

14.7 kDa protein containing 132 amino acid residues.

MCDAFVG TWK LVSSNFDDY MKEVG VGFAT R KVAGMAKPN MIISVNGDVI
TIKSESTFKN TEISFILGQE FDEV TADDRK
VKSTITLDGG VLVHVQKWDG KSTTIK RKRE DDKLVVECVM KGV TSTRVYE RA.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Sterile filtered and lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH4.

Solubility

0.1M Acetate buffer pH4 and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/ml. In higher concentrations the solubility of this antigen is limited.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized protein remains stable until the expiry date when stored at -20°C.

Purity

Greater than 90% as determined by SDS-PAGE.

Specificity

The amino acid sequence of the recombinant human FABP4 is 100% homologous to the amino acid sequence of the human FABP4.

Purification Method

Two-step procedure using size exclusion chromatography before and after refolding.

Applications

· ELISA. · Western Blotting.

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