

## FABP4 Human

**Description:** 14.7 kDa protein containing 132 amino acid residues. MCDAFVGTWK LVSSNFDDY  
MKEVGVGAT RKVAGMAKPN MIISVNGDVI TIKSESTFKN TEISFILGQE  
FDEVTADDRKVKSTITLDGG VLVHVQKWDG KSTTIKRKRE DDKLVVECVM KGVSTSTRVYE RA.

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

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Purity:** Greater than 90% as determined by SDS-PAGE.

**Purification Method:**

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

**Specificity:**

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

**Formulation:**

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

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may  
not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**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 10g/ml.  
In higher concentrations the solubility of this antigen is limited.

**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

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total or macrophage-specific FABP4 deficiency confers dramatic protection against atherosclerosis in the apoE<sup>-/-</sup> 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.



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