

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

www.neobiolab.com

info@neobiolab.com

888.754.5670, +1 617.500.7103 United States

0800.088.5164, +44 020.8123.1558 United Kingdom

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.



Catalog #:PRPS-423

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