PRODUCT INFORMATION



FABP4 Polyclonal Antibody

Item No. 10004944

Overview and Properties

Contents: This vial contains peptide affinity-purified IgG.

Synonyms: Adipocyte FABP, A-FABP, ALBP, aP2, Fatty Acid Binding Protein 4 Immunogen: Synthetic peptide from the C-terminal region of human FABP4

Cross Reactivity: (+) FABP4; (-) FABP3, FABP5 Species Reactivity: (+) Human, mouse, rat

P15090 **Uniprot No.:** Form: Liquid

Storage: -20°C (as supplied)

Stability: ≥3 years

Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide

Rabbit Host:

Applications: Immunofluorescence (IF), Immunohistochemistry (IHC), and Western blot (WB);

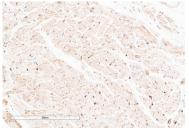
> the recommended starting dilution is 1:200 for IF and WB and 1:80 for IHC. Other applications were not tested, therefore optimal working concentration/dilution should

be determined empirically.

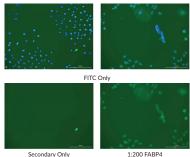
Images



Lane 1: His-tagged recombinant rat FABP4 lysate (1 ug) Lane 2: Rat brown fat (30 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human heart tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with FABP4 Polyclonal Antibody (Item No. 10004944) at a 1:80 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).



DAPI + FITC

Immunofluorescence analysis of paraformaldehyde-fixed A549 cells. After incubation with FABP4 Polyclonal Antibody (Item No. 10004944), at a 1:200 dilution (or negative control), cells were incubated with FITC-labeled anti-rabbit IgG (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM

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Description

Fatty acid binding protein 4 (FABP4) is a member of the intracellular lipid-binding protein (iLBP) family. It is composed of a β-barrel, which forms the lipid-binding site, and two α-helices that form a lid on the β-barrel. FABP4 is primarily expressed in adipocytes but has also been found in activated macrophages. It is involved in lipid transport and metabolism, insulin resistance, and angiogenesis, and its expression is induced by long-chain fatty acids and peroxisome proliferator-activated receptor γ (PPAR γ) agonists. Knockout of *Fabp4* prevents the development of atherosclerosis in $ApoE^{-/-}$ mice and increases body weight gain and insulin sensitivity in ob/ob mice. Fabp4 are increased in patients with colorectal cancer, and serum and synovial fluid levels of FABP4 are increased in patients with rheumatoid arthritis. And Sabp4 Polyclonal Antibody can be used for immunofluorescence (IF), immunohistochemistry (IHC), and Western blot (WB) applications.

References

- 1. Zimmerman, A.W. and Veerkamp, J.H. New insights into the structure and function of fatty acid-binding proteins. *Cell. Mol. Life Sci.* **59(7)**, 1096-1116 (2002).
- 2. Reese-Wagoner, A., Thompson, J., and Banaszak, L. Structural properties of the adipocyte lipid binding protein. *Biochim. Biophys. Acta* **1441(2-3)**, 106-116 (1999).
- 3. Baxa, C.A., Sha, R.S., Buelt, M.K., et al. Human adipocyte lipid-binding protein: Purification of the protein and cloning of its complementary DNA. Biochemistry 28(22), 8683-8690 (1989).
- 4. Perrella, M.A., Pellacani, A., Layne, M.D., *et al.* Absence of adipocyte fatty acid binding protein prevents the development of accelerated atherosclerosis in hypercholesterolemic mice. *FASEB J.* **15(10)**, 1774-1776 (2001).
- 5. Uysal, K.T., Scheja, L., Wiesbrock, S.M., et al. Improved glucose and lipid metabolism in genetically obese mice lacking aP2. Endocrinology **141(9)**, 3388-3396 (2000).
- 6. Hotamisligil, G.S., Johnson, R.S., Distel, R.J., *et al.* Uncoupling of obesity from insulin resistance through a targeted mutation in *aP2*, the adipocyte fatty acid binding protein. *Science* **274**(**5291**), 1377-1379 (1996).
- 7. Guo, D., Lin, C., Lu, Y., et al. FABP4 secreted by M1-polarized macrophages promotes synovitis and angiogenesis to exacerbate rheumatoid arthritis. *Bone Res.* **10(1)**, 45 (2022).
- 8. Bastie, C., Holst, D., Gaillard, D., *et al.* Expression of preoxisome proliferator-activated receptor PPARδ promotes induction of PPARγ and adipocyte differentiation in 3T3C2 fibroblasts. *J. Biol. Chem.* **274(31)**, 21920-21925 (1999).
- 9. Zhang, Y., Zhao, X., Deng, L., et al. High expression of FABP4 and FABP6 in patients with colorectal cancer. World J. Surg. Oncol. 17(1), 171 (2019).

ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897