

ACBP (FL-87): sc-30190

BACKGROUND

Long chain acyl-CoA esters (LCAs) act as both substrates and intermediates in metabolism, and as regulators of various intracellular functions. Acyl-CoA binding protein (ACBP) specifically binds to LCA with high affinity and regulates its availability. ACBP is structurally and functionally conserved among a diverse group of organisms, including human, rat, frog, insects, plants and yeast. The gene encoding human ACBP maps to chromosome 2, and is highly expressed in liver, soleus muscle and heart. The ACBP protein is also abundant in cells with a high level of lipogenesis and *de novo* fatty acid synthesis. Expression of ACBP is significantly induced during adipocyte differentiation. ACBP is a target gene for proliferator-activated receptor (PPAR) γ , and is directly activated by PPAR γ /RXR α and PPAR α /RXR α , but not by PPAR δ /RXR α . In addition to acyl-CoA binding and transport, ACBP is also implicated in γ -aminobutyric acid type A receptor binding, steroidogenesis and peptide hormone release.

REFERENCES

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- Knudsen, J., et al. 1993. The function of Acyl-CoA-binding protein (ACBP)/diazepam binding inhibitor (DBI). *Mol. Cell. Biochem.* 123: 129-138.
- Gersuk, V.H., et al. 1995. Molecular cloning and chromosomal localization of a pseudogene related to the human Acyl-CoA binding protein/diazepam binding inhibitor. *Genomics* 25: 469-476.
- Swinnen, J.V., et al. 1998. Identification of diazepam-binding inhibitor/ Acyl-CoA-binding protein as a sterol regulatory element-binding protein-responsive gene. *J. Biol. Chem.* 273: 19938-19944.
- Knudsen, J., et al. 2000. Role of Acyl-CoA-binding protein in Acyl-CoA metabolism and Acyl-CoA-mediated cell signaling. *J. Nutr.* 130: 294S-298S.
- Franch, J., et al. 2002. Acyl-coenzyme A binding protein expression is fibre-type specific in rat skeletal muscle but not affected by moderate endurance training. *Pflugers Arch.* 443: 387-393.

CHROMOSOMAL LOCATION

Genetic locus: DBI (human) mapping to 2q14.2; Dbi (mouse) mapping to 1 E2.3.

SOURCE

ACBP (FL-87) is a rabbit polyclonal antibody raised against amino acids 1-87 representing full length ACBP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

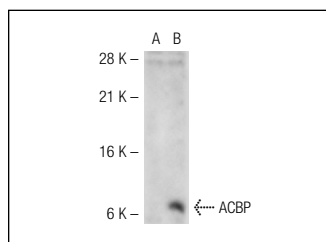
ACBP (FL-87) is recommended for detection of ACBP short and long isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ACBP siRNA (h): sc-40310, ACBP siRNA (m): sc-40311, ACBP shRNA Plasmid (h): sc-40310-SH, ACBP shRNA Plasmid (m): sc-40311-SH, ACBP shRNA (h) Lentiviral Particles: sc-40310-V and ACBP shRNA (m) Lentiviral Particles: sc-40311-V.

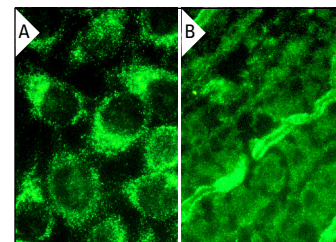
Molecular Weight of ACBP: 10 kDa.

Positive Controls: ACBP (h): 293T Lysate: sc-116768.

DATA



ACBP (FL-87): sc-30190. Western blot analysis of ACBP expression in non-transfected: sc-117752 (A) and human ACBP transfected: sc-116768 (B) 293T whole cell lysates.



ACBP (FL-87): sc-30190. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A), and normal mouse intestine frozen section showing cytoplasmic and extracellular staining (B).

SELECT PRODUCT CITATIONS

- Sandberg, M.B., et al. 2005. The gene encoding Acyl-CoA-binding protein is subject to metabolic regulation by both sterol regulatory element-binding protein and peroxisome proliferator-activated peceptor in hepatocytes. *J. Biol. Chem.* 280: 5258-5266.
- Yang, F., et al. 2008. Expression of hepatitis B virus proteins in transgenic mice alters lipid metabolism and induces oxidative stress in the liver. *J Hepatol.* 48: 12-19.
- Tsakagoshi, E., et al. 2011. Diazepam enhances production of diazepam-binding inhibitor (DBI), a negative saliva secretion regulator, localized in rat salivary gland. *J. Pharmacol. Sci.* 115: 221-229.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **ACBP (C-9): sc-376853**, our highly recommended monoclonal alternative to ACBP (FL-87).