



ACBP (27C9): sc-59445

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 10 kDa 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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- 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 2q12-q21; Dbi (mouse) mapping to 1 E2.

SOURCE

ACBP (27C9) is a mouse monoclonal antibody raised against an ACBP of human origin.

PRODUCT

Each vial contains IgG_{2b} in 100 μ l of PBS with < 0.1% sodium azide.

APPLICATIONS

ACBP (27C9) is recommended for detection of ACBP of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000).

Suitable for use as control antibody for ACBP siRNA (h): sc-40310.

Molecular Weight of ACBP: 10 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, store at -20° C. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.