SANTA CRUZ BIOTECHNOLOGY, INC.

ILBP (E-9): sc-515609

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The fatty acid binding protein (FABP) family of cytoplasmic hydrophobic ligand binding proteins influence lipid metabolism by binding and transporting long-chain fatty acids. Ileal lipid binding protein (ILBP) is a cytosolic ileocyte FABP that binds to both bile acids and fatty acids thereby mediating active uptake of bile acid in the ileum. Transport of bile acids from the liver is essential for the solubilization and transport of dietary lipids. ILBP contains ten antiparallel β strands arranged in two nearly orthogonal β sheets (β clam shell), covered on one side by two short, nearly parallel α helices. Binding of fatty acids or bile acids to ILBP alters the side-chain proton resonances of amino acids within the protein cavity and increases the affinity of ILBP for bile acids; bile acid binding to ILBP is a positive-feedback regulation mechanism. The human ILBP gene maps to position 5q33.3, with transcript being abundant in the small intestine.

REFERENCES

1. Oelkers, P. and Dawson, P.A. 1995. Cloning and chromosomal localization of the human ileal lipid-binding protein. Biochim. Biophys. Acta 1257: 199-202.
2. Lucke, C., et al. 1996. Flexibility is a likely determinant of binding specificity in the case of ileal lipid binding protein. Structure 4: 785-800.
3. Borchers, T., et al. 1997. Heart-type fatty acid binding protein-involvement in growth inhibition and differentiation. Prostaglandins Leukot. Essent. Fatty Acids 57: 77-84.
4. Kramer, W., et al. 1998. Intestinal absorption of bile acids: paradoxical behaviour of the 14 kDa ileal lipid-binding protein in differential photoaffinity labelling. Biochem. J. 333: 335-341.

CHROMOSOMAL LOCATION

Genetic locus: FABP6 (human) mapping to 5q33.3; Fabp6 (mouse) mapping to 11 B1.1.

SOURCE

ILBP (E-9) is a mouse monoclonal antibody raised against amino acids 1-128 representing full length ILBP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ILBP (E-9) is available conjugated to agarose (sc-515609 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515609 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515609 PE), fluorescein (sc-515609 FITC), Alexa Fluor® 488 (sc-515609 AF488), Alexa Fluor® 546 (sc-515609 AF546), Alexa Fluor® 594 (sc-515609 AF594) or Alexa Fluor® 647 (sc-515609 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515609 AF680) or Alexa Fluor® 790 (sc-515609 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ILBP (E-9) is recommended for detection of ILBP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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 ILBP siRNA (h): sc-41241, ILBP siRNA (m): sc-41242, ILBP shRNA Plasmid (h): sc-41241-SH, ILBP shRNA Plasmid (m): sc-41242-SH, ILBP shRNA (h) Lentiviral Particles: sc-41241-V and ILBP shRNA (m) Lentiviral Particles: sc-41242-V.

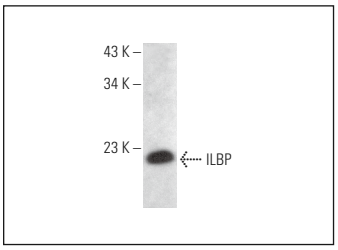
Molecular Weight of ILBP: 14 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Daudi cell lysate: sc-2415.

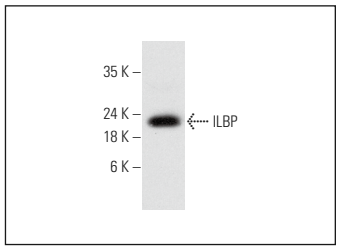
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ILBP (E-9): sc-515609. Western blot analysis of ILBP expression in NIH/3T3 whole cell lysate.



ILBP (E-9): sc-515609. Western blot analysis of ILBP expression in Daudi whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liu, J., et al. 2020. Geniposide reduces cholesterol accumulation and increases its excretion by regulating the FXR-mediated liver-gut crosstalk of bile acids. Pharmacol. Res. 152: 104631.

STORAGE

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