SANTA CRUZ BIOTECHNOLOGY, INC.

BAAT (ZA-18): sc-100475

BACKGROUND

BAAT (bile acid coenzyme A (CoA):amino acid N-acyltransferase), also known as BAT, BACAT or glycine N-choloyltransferase, is a member of the C/M/P thioester hydrolase family of proteins. Localizing to the cytoplasm and to peroxisomes, BAAT plays an essential role in bile acid metabolism, being the sole enzyme responsible for catalyzing the second step in the conjugation of bile acids to taurine or glycine. The first step in this reaction is the conversion of bile acids to CoA thioesters by ACSVL6 (bile acid CoA ligase). The conjugation of bile acids is important for its excretion into bile and it is also important for protection against toxicity by the accumulation of unconjugated bile acids. BAAT can be found in liver, pancreas, intestine and gallbladder mucosa. Mutations in the gene encoding BAAT have been associated with familial hypercholanemia (FHCA), a disease characterized by fat malabsorption, an increase in serum bile acid concentrations and itching.

REFERENCES

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2. Carlton, V.E., et al. 2003. Complex inheritance of familial hypercholanemia with associated mutations in TJP2 and BAAT. Nat. Genet. 34: 91-96.
3. Solaas, K., et al. 2004. Differential regulation of cytosolic and peroxisomal bile acid amidation by PPAR α activation favors the formation of unconjugated bile acids. J. Lipid Res. 45: 1051-1060.
4. Carlton, V.E., et al. 2004. Molecular basis of intrahepatic cholestasis. Ann. Med. 36: 606-617.
5. Shonsey, E.M., et al. 2005. Bile acid coenzyme A:amino acid N-acyltransferase in the amino acid conjugation of bile acids. Meth. Enzymol. 400: 374-394.
6. Styles, N.A., et al. 2007. Quantification and regulation of the subcellular distribution of bile acid coenzyme A:amino acid N-acyltransferase activity in rat liver. J. Lipid Res. 48: 1305-1315.
7. Tougou, K., et al. 2007. Genetic polymorphism of bile acid CoA:amino acid N-acyltransferase in Japanese individuals. Drug Metab. Pharmacokinet. 22: 125-128.
8. Pellicoro, A., et al. 2007. Human and rat bile acid-CoA:amino acid N-acyltransferase are liver-specific peroxisomal enzymes: implications for intracellular bile salt transport. Hepatology 45: 340-348.
9. Shonsey, E.M., et al. 2008. Inactivation of human liver bile acid CoA:amino acid N-acyltransferase by the electrophilic lipid, 4-hydroxynonenal. J. Lipid Res. 49: 282-294.

CHROMOSOMAL LOCATION

Genetic locus: BAAT (human) mapping to 9q31.1.

SOURCE

BAAT (ZA-18) is a mouse monoclonal antibody raised against recombinant BAAT of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

BAAT (ZA-18) is recommended for detection of BAAT of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BAAT siRNA (h): sc-92727, BAAT shRNA Plasmid (h): sc-92727-SH and BAAT shRNA (h) Lentiviral Particles: sc-92727-V.

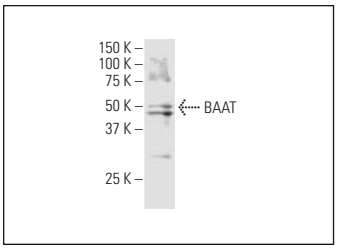
Molecular Weight of BAAT: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



BAAT (ZA-18): sc-100475. Western blot analysis of BAAT expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Beer, A.J., et al. 2020. Reduced Mrp2 surface availability as PI3Kγ-mediated hepatocytic dysfunction reflecting a hallmark of cholestasis in sepsis. Sci. Rep. 10: 13110.

STORAGE

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

RESEARCH USE

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