SANTA CRUZ BIOTECHNOLOGY, INC.

Asbt (C-14): sc-27493

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Apical sodium/bile acid cotransporter (Asbt), also known as ileal sodium/bile acid cotransporter (ISBT), is an integral membrane protein that mediates bile acid recycling from the intestine to the liver. Small intestine bile acids facilitate absorption of fat-soluble vitamins and cholesterol. Asbt protein present in the intestinal ileum binds bile salts in the gut lumen and transports them across the brush border membrane to the ileal lipid-binding protein (Ilbp), which binds bile acid in the cytoplasm of the cell and mediates normal flow back to the liver. ASBT function is essential for maintenance of cholesterol homeostasis in the body, though the molecular mechanisms of this role are not entirely understood. Low levels of Asbt are a cause of primary bile acid malabsorption (PBAM), an idiopathic intestinal disorder and are also a cause of Crohn's disease (CD). The Asbt gene (SLC10A2) is located on chromosome 13q33.1 and is clearly distinct from the hepatic sodium-bile acid cotransporter gene (SLC10A1).

REFERENCES

1. Wong, M.H., et al. 1996. Localization of the ileal sodium-bile acid cotransporter gene (SLC10A2) to human chromosome 13q33. Genomics 33: 538-540.
2. Small, D.M. 1997. Point mutations in the ileal bile salt transporter cause leaks in the enterohepatic circulation leading to severe chronic diarrhea and malabsorption. J. Clin. Invest. 99: 1807-1808.
3. Weinman, S.A. 1997. Electrogenicity of Na^+-coupled bile acid transporters. Yale J. Biol. Med. 70: 331-340.
4. Shneider, B.L. 2001. Intestinal bile acid transport: biology, physiology, and pathophysiology. J. Pediatr. Gastroenterol. Nutr. 32: 407-417.
5. Hagenbuch, B., et al. 2004. The sodium bile salt cotransport family SLC10. Pflugers Arch. 447: 566-570.
6. Jung, D., et al. 2004. Human ileal bile acid transporter gene ASBT (SLC10A2) is transactivated by the glucocorticoid receptor. Gut 53: 78-84.

CHROMOSOMAL LOCATION

Genetic locus: SLC10A2 (human) mapping to 13q33.1.

SOURCE

Asbt (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Asbt of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27493 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Asbt (C-14) is recommended for detection of Asbt of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

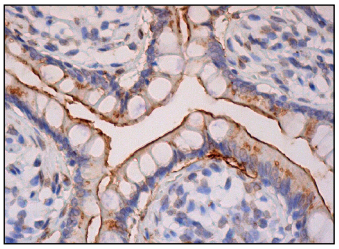
Asbt (C-14) is also recommended for detection of Asbt in additional species, including porcine.

Suitable for use as control antibody for Asbt siRNA (h): sc-106906, Asbt shRNA Plasmid (h): sc-106906-SH and Asbt shRNA (h) Lentiviral Particles: sc-106906-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Asbt (C-14): sc-27493. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Masyuk, A.I., et al. 2013. Ciliary subcellular localization of TGR5 determines the cholangiocyte functional response to bile acid signaling. Am. J. Physiol. Gastrointest. Liver Physiol. 304: G1013-G1024.

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.