SANTA CRUZ BIOTECHNOLOGY, INC.

FIC1 (G-20): sc-67712

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FIC1 is a 1,251 amino acid protein encoded by the human gene ATP8B1 and belongs to the cation transport ATPase (P-type) family, type IV subfamily. FIC1 is a multi-pass membrane protein believed to play a role in the transport of aminophospholipids from the outer to the inner leaflet of various membranes and in the maintenance of asymmetric distribution of phospholipids in the canicular membrane. It may also have a role in transport of bile acids into the canaliculus, uptake of bile acids from intestinal contents into intestinal mucosa, or both. FIC1 is found in most tissues except brain and skeletal muscle and is most abundant in pancreas and small intestine. Defects in the ATP8B1 gene are the cause of intrahepatic cholestasis (PFIC1), also known as Byler disease. PFIC1 is an autosomal recessive disorder, characterized by early infancy cholestasis, that may be initially episodic but progresses to malnutrition, growth retardation and end-stage liver disease before adulthood.

REFERENCES

1. Alvarez, L., et al. 2004. Reduced hepatic expression of farnesoid X receptor in hereditary cholestasis associated to mutation in ATP8B1. Hum. Mol. Genet. 13: 2451-2460.
2. Jirsa, M., et al. 2004. Indel in the FIC1/ATP8B1 gene-a novel rare type of mutation associated with benign recurrent intrahepatic cholestasis. Hepatol. Res. 30: 1-3.
3. van Mil, S.W., et al. 2004. FIC1 is expressed at apical membranes of different epithelial cells in the digestive tract and is induced in the small intestine during postnatal development of mice. Pediatr. Res. 56: 981-987.
4. Paulusma, C.C., et al. 2006. Atp8b1 deficiency in mice reduces resistance of the canalicular membrane to hydrophobic bile salts and impairs bile salt transport. Hepatology 44: 195-204.
5. Walkowiak, J., et al. 2006. Normal pancreatic secretion in children with progressive familial intrahepatic cholestasis type 1. Scand. J. Gastroenterol. 41: 1480-1483.
6. Groen, A., et al. 2006. Increased serum concentrations of secondary bile salts during cholate feeding are due to coprophagy. A study with wildtype and Atp8b1-deficient mice. Mol. Pharm. 3: 756-761.
7. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.

CHROMOSOMAL LOCATION

Genetic locus: ATP8B1 (human) mapping to 18q21.31; Atp8b1 (mouse) mapping to 18 E1.

SOURCE

FIC1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of FIC1 of human origin.

STORAGE

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

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-67712 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FIC1 (G-20) is recommended for detection of FIC1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FIC1 (G-20) is also recommended for detection of FIC1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FIC1 siRNA (h): sc-62316, FIC1 siRNA (m): sc-62317, FIC1 shRNA Plasmid (h): sc-62316-SH, FIC1 shRNA Plasmid (m): sc-62317-SH, FIC1 shRNA (h) Lentiviral Particles: sc-62316-V and FIC1 shRNA (m) Lentiviral Particles: sc-62317-V.

Molecular Weight of FIC1: 144 kDa.

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.

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.