

# FIC1 (H-91): sc-134967

## 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

- 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.
- 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.
- 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.
- Paulusma, C.C., et al. 2006. Atp8b1 deficiency in mice reduces resistance of the canicular membrane to hydrophobic bile salts and impairs bile salt transport. *Hepatology* 44: 195-204.

## CHROMOSOMAL LOCATION

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

## SOURCE

FIC1 (H-91) is a rabbit polyclonal antibody raised against amino acids 1161-1251 mapping at the C-terminus of FIC1 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

FIC1 (H-91) 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), 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).

FIC1 (H-91) 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.

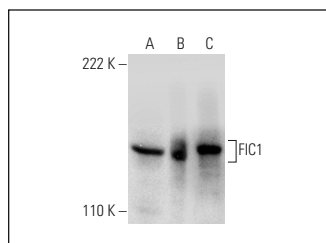
Molecular Weight of FIC1: 144 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or HEK293 whole cell lysate: sc-45136.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



FIC1 (H-91): sc-134967. Western blot analysis of FIC1 expression in HeLa (A), A-431 (B) and HEK293 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Chen, F., et al. 2013. Phospholipase D2 mediates signaling by ATPase class I type 8B membrane 1. *J. Lipid Res.* 54: 379-385.

## RESEARCH USE

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