

## BSEP (H-180): sc-25571

### BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionary conserved family of proteins that catalyze the transport of molecules across extra- and intracellular membranes through the energy of ATP hydrolysis. ABC genes comprise seven subfamilies, designated ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, and White. The secretion of bile salt molecules from blood into bile is a major driving force for bile formation. Bile salt export pump (BSEP) is a member of the MDR/TAP subfamily of ABC transporters that mediates the transport of bile acids across the hepatocyte canalicular membrane and regulates bile acid-dependent bile secretion. BSEP contains putative phosphorylation sites for protein kinase A, protein kinase C (PKC) and Ca<sup>2+</sup>-calmodulin dependent kinase II, whose regulation may be dependent on bile salt concentration.

### REFERENCES

1. Kullak-Ublick, G.A., et al. 2000. Hepatic transport of bile salts. *Semin. Liver Dis.* 20: 273-292.
2. Akita, H., et al. 2001. Characterization of bile acid transport mediated by multidrug resistance associated protein 2 and bile salt export pump. *Biochim. Biophys. Acta* 1511: 7-16.
3. Ananthanarayanan, M., et al. 2001. Human bile salt export pump (BSEP) promoter is transactivated by the farnesoid X receptor/bile acid receptor (FXR/BAR). *J. Biol. Chem.* 276: 28857-28865.
4. Noe, J., et al. 2001. Characterization of the mouse bile salt export pump overexpressed in the baculovirus system. *Hepatology* 33: 1223-1231.
5. Crocenzi, F.A., et al. 2003. Impaired localisation and transport function of canalicular BSEP in tauroolithocholate induced cholestasis in the rat. *Gut* 52: 1170-1177.
6. Patel, P., et al. 2003. Semi quantitative expression analysis of MDR3, FIC1, BSEP, OATP-A, OATP-C, OATP-D, OATP-E and NTCP gene transcripts in 1st and 3rd trimester human placenta. *Placenta* 24: 39-44.
7. Elferink, M.G., et al. 2004. LPS-induced downregulation of MRP2 and BSEP in human liver is due to a posttranscriptional process. *Am. J. Physiol. Gastrointest. Liver Physiol.* 287: G1008-G1016.

### CHROMOSOMAL LOCATION

Genetic locus: ABCB11 (human) mapping to 2q31.1; Abcb11 (mouse) mapping to 2 C2.

### SOURCE

BSEP (H-180) is a rabbit polyclonal antibody raised against amino acids 1-180 of BSEP 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.

### APPLICATIONS

BSEP (H-180) is recommended for detection of BSEP 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).

BSEP (H-180) is also recommended for detection of BSEP in additional species, including porcine.

Suitable for use as control antibody for BSEP siRNA (h): sc-41157, BSEP siRNA (m): sc-41158, BSEP shRNA Plasmid (h): sc-41157-SH, BSEP shRNA Plasmid (m): sc-41158-SH, BSEP shRNA (h) Lentiviral Particles: sc-41157-V and BSEP shRNA (m) Lentiviral Particles: sc-41158-V.

Molecular Weight of BSEP: 160-190 kDa.

Positive Controls: C3H/10T1/2 cell lysate: sc-3801, KNRK whole cell lysate: sc-2214 or rat liver extract: sc-2395.

### 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.

### SELECT PRODUCT CITATIONS

1. Jara, P., et al. 2009. Recurrence of bile salt export pump deficiency after liver transplantation. *N. Engl. J. Med.* 361: 1359-1367.
2. Van Rooyen, D.M., et al. 2011. Hepatic free cholesterol accumulates in obese, diabetic mice and causes nonalcoholic steatohepatitis. *Gastroenterology* 141: 1393-1403.
3. Zhou, Z.X., et al. 2011. Beneficial effects of colchicine on 17 $\alpha$ -ethynylestradiol-induced cholestasis in rats. *Arzneimittelforschung* 61: 173-179.

### RESEARCH USE

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



Try **BSEP (F-6): sc-74500**, our highly recommended monoclonal alternative to BSEP (H-180). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **BSEP (F-6): sc-74500**.