## SANTA CRUZ BIOTECHNOLOGY, INC.

# BSEP (F-6): sc-74500



## BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionarily 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.

## **CHROMOSOMAL LOCATION**

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

## SOURCE

BSEP (F-6) is a mouse monoclonal antibody raised against amino acids 1-180 of BSEP of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG\_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BSEP (F-6) is available conjugated to agarose (sc-74500 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74500 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74500 PE), fluorescein (sc-74500 FITC), Alexa Fluor<sup>®</sup> 488 (sc-74500 AF488), Alexa Fluor<sup>®</sup> 546 (sc-74500 AF546), Alexa Fluor<sup>®</sup> 594 (sc-74500 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-74500 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-74500 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-74500 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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#### **APPLICATIONS**

BSEP (F-6) is recommended for detection of BSEP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

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: c4 whole cell lysate: sc-364186, C3H/10T1/2 cell lysate: sc-3801 or KNRK whole cell lysate: sc-2214.

### STORAGE

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

DATA





BSEP (F-6): sc-74500. Western blot analysis of BSEP expression in C3H/10T1/2 (A), c4 (B) and KNRK (C) whole cell lysates.

BSEP (F-6): sc-74500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of glandular cells.

#### **SELECT PRODUCT CITATIONS**

- Chen, B.C., et al. 2009. Retinoid X receptor α participation in dexamethasone-induced rat bile acid coenzyme A-amino acid N-acyltransferase expression in septic liver. Shock 32: 164-171.
- Xu, W., et al. 2016. Dihydroartemisinin protects against alcoholic liver injury through alleviating hepatocyte steatosis in a farnesoid X receptordependent manner. Toxicol. Appl. Pharmacol. 315: 23-34.
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- Miszczuk, G.S., et al. 2018. Mechanisms of canalicular transporter endocytosis in the cholestatic rat liver. Biochim. Biophys. Acta 1864: 1072-1085.
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- Garzel, B., et al. 2020. Metformin disrupts bile acid efflux by repressing bile salt export pump expression. Pharm. Res. 37: 26.
- Hess, M.W., et al. 2021. Advanced microscopy for liver and gut ultrastructural pathology in patients with MVID and PFIC caused by MY05B mutations. J. Clin. Med. 10: 1901.
- Horiuchi, S., et al. 2022. Construction of a culture protocol for functional bile canaliculi formation to apply human iPS cell-derived hepatocytes for cholestasis evaluation. Sci. Rep. 12: 15192.
- Kim, M.H., et al. 2023. Macrophage inhibitory cytokine-1 aggravates dietinduced gallstone formation via increased ABCG5/ABCG8 expression. PLoS ONE 18: e0287146.
- Sohail, I., et al. 2024. The noncanonical nucleotide binding site 1 of the bile salt export pump is optimized for proper function of the transporter. Cell Biol. Int. 48: 638-646.

#### **RESEARCH USE**

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