

BACKGROUND

Bile acids are the major determinant and driving force for the generation of bile flow. Bile acid transport across the canalicular membrane is primarily an ATP-dependent process. The predominant transporter is the bile salt excretory pump (BSEP, ABCB11), a member of the adenosine triphosphate-binding cassette (ABC) family of transporters. BSEP/ABCB11 is expressed in the hepatocyte canalicular membrane. BSEP shares a high degree of sequence homology multidrug resistance 1 (MDR1/P-glycoprotein/ABCB1) and was originally called the sister of P-glycoprotein (SPGP). However, it has been found that BSEP does not show a broad substrate specificity compared with MDR1, and mainly recognizes bile acids. Only a few nonbile acid substrates (vinblastine and some fluorescent substrates) have been reported to date. Therefore BSEP plays an essential role in the biliary excretion of bile acids. Regulatory mechanisms that can coordinate the genes encoding bile acid transport proteins are critically important to avoid hepatocyte damage from intracellular accumulation of bile acids. Bile salts are natural ligands for several nuclear hormone receptors expressed in liver and intestine.¹

In addition, BSEP function can be disturbed or abolished by inherited mutations. This will lead to progressive intrahepatic cholestasis and severe liver disease. In addition to mutations, BSEP can be inhibited by acquired factors, such as xenobiotics or drugs, aberrant bile salt metabolites, or pregnancy. This inhibition will lead to acquired cholestasis. Some drugs are now known to be competitive inhibitors of BSEP. Furthermore, a polymorphism in the gene coding for BSEP has been identified as a potential susceptibility factor for acquired cholestasis.²

References:

1. Thompson, R. & Strautnieks, S.: Semin. Liver Dis. 21:545-50, 2001
2. Stieger, B.: Drug Metab. Rev. 42:437-45, 2010

TECHNICAL INFORMATION

Source:

BSEP Antibody is a rabbit antibody raised against a short peptide from human BSEP carboxyl-terminal sequence.

Specificity and Sensitivity:

This antibody detects endogenous BSEP proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:

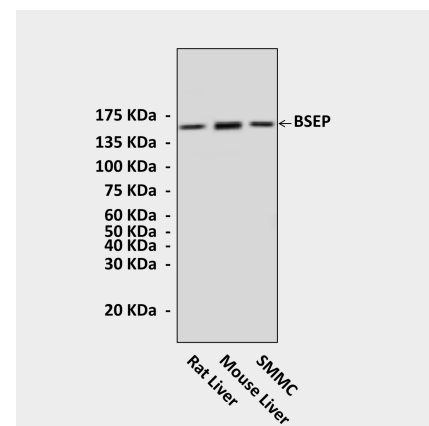
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:500-1000
IP	n/d
IHC	1:50-100
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Western Blot detection of BSEP proteins in various tissue and cell lysates using BSEP Antibody.

