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ABCB11 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP6110a

Specification

ABCB11 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O95342

ABCB11 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 8647

Other Names
Bile salt export pump, ATP-binding cassette sub-family B member 11, ABCB11, BSEP

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6110a was selected from the C-term region of human ABCB11 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ABCB11 Antibody (C-term) Blocking Peptide - Protein Information

Name ABCB11 (HGNC:42)

Synonyms BSEP {ECO:0000303|Ref.2}

Function
Catalyzes the transport of the major hydrophobic bile salts, such as taurine and glycine-conjugated cholic acid across the canalicular membrane of hepatocytes in an ATP-dependent manner, therefore participates in hepatic bile acid homeostasis and consequently to lipid homeostasis through regulation of biliary lipid secretion in a bile salts dependent manner (PubMed:15791618, PubMed:16332456, PubMed:18985798, PubMed:19228692, PubMed:20010382, PubMed:20398791, PubMed:<a

href="http://www.uniprot.org/citations/22262466" target="_blank">22262466, PubMed:24711118, PubMed:29507376, PubMed:32203132). Transports taurine-conjugated bile salts more rapidly than glycine-conjugated bile salts (PubMed:16332456). Also transports non-bile acid compounds, such as pravastatin and fexofenadine in an ATP-dependent manner and may be involved in their biliary excretion (PubMed:15901796, PubMed:18245269).

Cellular Location
Apical cell membrane; Multi-pass membrane protein. Recycling endosome membrane {ECO:0000250|UniProtKB:O70127}; Multi-pass membrane protein {ECO:0000250|UniProtKB:O70127}. Endosome {ECO:0000250|UniProtKB:O70127}. Cell membrane; Multi-pass membrane protein. Note=Internalized at the canalicular membrane through interaction with the adapter protein complex 2 (AP-2) (PubMed:22262466). At steady state, localizes in the canalicular membrane but is also present in recycling endosomes. ABCB11 constantly and rapidly exchanges between the two sites through tubulo-vesicles carriers that move along microtubules. Microtubule-dependent trafficking of ABCB11 is enhanced by taurocholate and cAMP and regulated by STK11 through a PKA-mediated pathway. Trafficking of newly synthesized ABCB11 through endosomal compartment to the bile canalicular membrane is accelerated by cAMP but not by taurocholate (By similarity). Cell membrane expression is up-regulated by short- and medium-chain fatty acids (PubMed:20398791) {ECO:0000250|UniProtKB:O70127, ECO:0000269|PubMed:20398791, ECO:0000269|PubMed:22262466}

Tissue Location
Expressed predominantly, if not exclusively in the liver, where it was further localized to the canalicular microvilli and to subcanalicular vesicles of the hepatocytes by in situ

ABCB11 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ABCB11 Antibody (C-term) Blocking Peptide - Images

ABCB11 Antibody (C-term) Blocking Peptide - Background

ABCB11 is involved in the ATP-dependent secretion of bile salts into the canaliculus of hepatocytes. It is expressed predominatly, if not exclusively, in the liver, where it is further localized to the canilicular microvilli and to subcanilicular vesicles fo the hepatocytes. Structurally, ABCB11 is a multifunctional polypeptide with two homologus halves, each containing a hydrophobic membrane-anchoring domain and an ATP binding cassette (ABC) domain. Defects in ABCB11 are the cause of progressive familial intrahepatic cholestasis 2 (PFIC2). PFIC2 is an inherited liver disease of childhood which is characterized by cholestasis and normal serum gamma-glutamyltransferase activity. Defects in ABCB11 are also found in cases of chronic intrahepatic cholestasis without obvious familial history of chronic liver disease.

ABCB11 Antibody (C-term) Blocking Peptide - References

Chen, H.L., et al., J. Pediatr. 140(1):119-124 (2002).Saito, S., et al., J. Hum. Genet. 47(1):38-50 (2002).Strautnieks, S.S., et al., Nat. Genet. 20(3):233-238 (1998).