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ABCB11 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6110A

Product Information

Application	WB, IHC-P, E
Primary Accession	O95342
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	146407
Antigen Region	1038-1067

Additional Information

Gene ID	8647
Other Names	Bile salt export pump, ATP-binding cassette sub-family B member 11, ABCB11, BSEP
Target/Specificity	This ABCB11 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1038-1067 amino acids from the C-terminal region of human ABCB11.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ABCB11 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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: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

Background

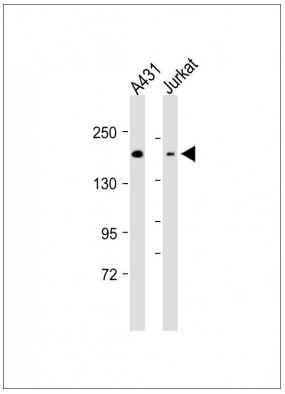
ABCB11 is involved in the ATP-dependent secretion of bile salts into the canaliculus of hepatocytes. It is expressed predominatly, if not exclusively, in the liver, where it is further localized to the canilicular microvilli and to subcanilicular vesicles fo the hepatocytes. Structurally, ABCB11 is a 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.

References

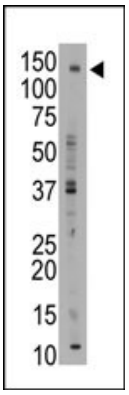
Chen, H.L., et al., J. Pediatr. 140(1):119-124 (2002). Saito, S., et al., J. Hum. Genet. 47(1):38-50 (2002). Strautnieks, S.S., et al., Nat. Genet. 20(3):233-238 (1998).

Images

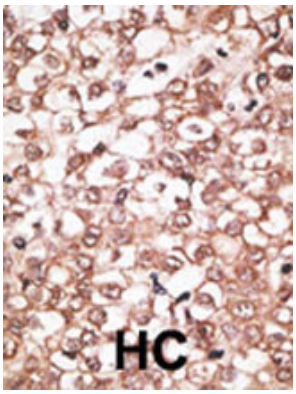
All lanes : Anti-ABCB11 Antibody (C-term) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band



size : 200kDa Blocking/Dilution buffer: 5% NFDM/TBST.



The anti-ABCB11 C-term Pab (Cat. #AP6110a) is used in Western blot to detect ABCB11 in mouse liver tissue lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Hepatocyte-specific ablation of Foxa2 alters bile acid homeostasis and results in endoplasmic reticulum stress.
- "Do-not-resuscitate" orders during anesthesia and surgery.