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ABCB4 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6112A

Product Information

Application	WB, IHC-P, E
Primary Accession	P21439
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	141523
Antigen Region	624-654

Additional Information

Gene ID	5244
Other Names	Multidrug resistance protein 3, ATP-binding cassette sub-family B member 4, P-glycoprotein 3, ABCB4, MDR3, PGY3
Target/Specificity	This ABCB4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 624-654 amino acids from the Central region of human ABCB4.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	ABCB4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABCB4 (HGNC:45)
Function	[Isoform 1]: Energy-dependent phospholipid efflux translocator that acts as a positive regulator of biliary lipid secretion. Functions as a floppase that translocates specifically phosphatidylcholine (PC) from the inner to the outer leaflet of the canalicular membrane bilayer into the canaliculi of hepatocytes. Translocation of PC makes the biliary phospholipids available for extraction

into the canaliculi lumen by bile salt mixed micelles and therefore protects the biliary tree from the detergent activity of bile salts (PubMed:17523162, PubMed:21820390, PubMed:23468132, PubMed:24594635, PubMed:24723470, PubMed:24806754, PubMed:31873305, PubMed:7957936, PubMed:8898203, PubMed:9366571). Plays a role in the recruitment of phosphatidylcholine (PC), phosphatidylethanolamine (PE) and sphingomyelin (SM) molecules to nonraft membranes and to further enrichment of SM and cholesterol in raft membranes in hepatocytes (PubMed:23468132). Required for proper phospholipid bile formation (By similarity). Indirectly involved in cholesterol efflux activity from hepatocytes into the canalicular lumen in the presence of bile salts in an ATP-dependent manner (PubMed:24045840). Promotes biliary phospholipid secretion as canaliculi-containing vesicles from the canalicular plasma membrane (PubMed:28012258, PubMed:9366571). In cooperation with ATP8B1, functions to protect hepatocytes from the deleterious detergent activity of bile salts (PubMed:21820390). Does not confer multidrug resistance (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00441}. Apical cell membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00441}. Membrane raft. Cytoplasm Cytoplasmic vesicle, clathrin-coated vesicle {ECO:0000250|UniProtKB:Q08201}. Note=Localized at the apical canalicular membrane of the epithelial cells lining the lumen of the bile canaliculi and biliary ductules (By similarity). Transported from the Golgi to the apical bile canalicular membrane in a RACK1-dependent manner (PubMed:19674157). Redistributed into pseudocanaliculi formed between cells in a bezafibrate- or PPARA-dependent manner (PubMed:15258199). Localized preferentially in lipid nonraft domains of canalicular plasma membranes (PubMed:23468132) {ECO:0000250|UniProtKB:P21440, ECO:0000269|PubMed:15258199, ECO:0000269|PubMed:19674157, ECO:0000269|PubMed:23468132}

Background

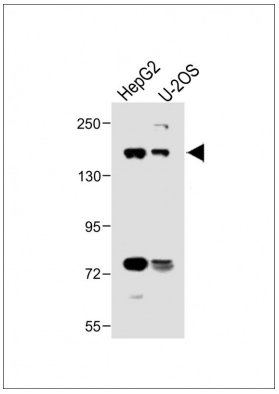
The membrane-associated protein encoded ABCB4 is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance as well as antigen presentation. This gene encodes a full transporter and member of the p-glycoprotein family of membrane proteins with phosphatidylcholine as its substrate. The function of this protein has not yet been determined; however, it may involve transport of phospholipids from liver hepatocytes into bile. Alternative splicing of this gene results in several products of undetermined function.

References

Eloranta, M.L., et al., Eur J Obstet Gynecol Reprod Biol 105(2):132-135 (2002).
Eloranta, M.L., et al., Eur J Obstet Gynecol Reprod Biol 104(2):109-112 (2002).
Jacquemin, E., Semin. Liver Dis. 21(4):551-562 (2001).
Smit, J.J., et al., Biochim. Biophys. Acta 1261(1):44-56 (1995).
Ruetz, S., et al., Cell 77(7):1071-1081 (1994).

Images

All lanes : Anti-hABCB4-S639 at 1:500 dilution Lane 1: HepG2 whole cell lysate Lane 2: U-2OS whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000



dilution. Predicted band size : 142 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Hepatic lipid accumulation in apolipoprotein C-I-deficient mice is potentiated by cholesteryl ester transfer protein.