

Anti-ABCB1/Mdr1 Antibody

Catalog Number: A00049

About ABCB1

This antibody is suitable for Cancer, Immunology and Nuclear Signaling research. ATP-Binding Cassette Sub-Family B Member 1 (ABCB1, also named P-glycoprotein) is a plasma membrane-associated multidrug transporter that utilizes the energy of ATP hydrolysis to pump toxic xenobiotics out of cells. Unique features of ABCB1 are its very broad substrate specificity and its basal ATPase activity in the absence of transport substrates. Human ABCB1 plays an important role in absorption, distribution, metabolism, excretion and toxicity of pharmacologically relevant drugs. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anti-cancer drugs. This protein also functions as a transporter across the blood-brain barrier.

Overview

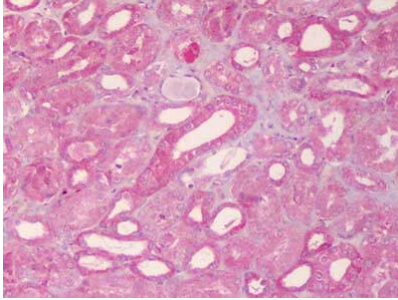
Product Name	Anti-ABCB1/Mdr1 Antibody
Reactive Species	Human
Description	Boster Bio Anti-ABCB1/Mdr1 Antibody (Catalog # A00049). Tested in ELISA, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	P08183

Technical Details

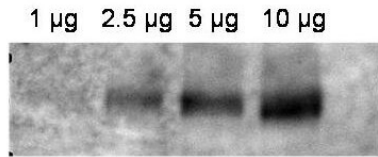
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near amino acids 255-280 of human ABCB1 protein.
Predicted Reactive Species	Canine, Monkey
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG

Form	Liquid (sterile filtered)
Concentration	1.0 mg/mL by UV absorbance at 280 nm
Purification	This affinity-purified antibody is directed against human ABCB1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with ABCB1 protein from human, monkey, dog, mouse, and rat based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Suggested Dilutions	ELISA: 1:10,000 - 1:50,000 IHC: User optimized WB: 1:200 - 1:2,000 This affinity purified antibody has been tested for use in ELISA, immunohistochemistry, and western blot.

Anti-ABCB1/Mdr1 Antibody (A00049) Images



IHC using Boster ABCB1 Antibody at 20 ug/ml against FFPE human kidney. Moderate to strong cytoplasmic and membranous staining seen in this example. Similar staining also observed in other tissues including liver, kidney, and small intestine. The antibody showed minimal background staining and worked well in formalin-fixed tissues. Image provided courtesy of Lifespan Biosciences.



Western blot using Boster's affinity purified anti-ABCB1 antibody shows detection of ABCB1 in crude membrane extracts from HF insect cells over-expressing human ABCB1. The extract was loaded onto a gel in the amounts indicated followed by electrophoresis and transfer to nitrocellulose. The membrane was probed with the primary antibody diluted to 1:600, followed by Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG at 1:10,000. Personal Communication, Anna Calcagno, CCR-NCI, Bethesda, MD.

6 Publications Citing This Product

1. PubMed ID: 10.1158/1541-7786.MCR-18-1072, Breast Cancer Risk-Associated SNPs in the mTOR Promoter Form De Novo KLF5- and ZEB1-Binding Sites that Influence the Cellular Response to Paclitaxel
2. PubMed ID: 10.1016/j.phymed.2014.04.029, Tetrandrine and fangchinoline, bisbenzylisoquinoline alkaloids from Stephania tetrandra can reverse multidrug resistance by inhibiting P-glycoprotein activity in multidrug resistant human cancer cells
3. PubMed ID: 31467112, Chen Q, Deng X, Hu X, Guan S, He M, Wang Y, Wei B, Zhang J, Zhao H, Yao W, Jin F, Liu Y, Chen J, Olapade OI, Wu H, Wei M. Breast Cancer Risk-Associated SNPs in the mTOR Promoter Form De Novo KLF5- and ZEB1-Binding Sites that Influence the Cellular Response to Paclitaxel. Mol Cancer Res. 2019 Nov;17(11):2244-2256. doi:10.1158/1541-7786.MCR-18-1072. Epub 2019 Aug 29. PMID:31467112.

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