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ABCB1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1892a

Product Information

Application	WB, E
Primary Accession	P08183
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6G11F8
Isotype	IgG1
Calculated MW	141479
Description	The membrane-associated protein encoded by this gene 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. The protein encoded by this gene is an ATP-dependent drug efflux pump for xenobiotic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood-brain barrier.
Immunogen	Purified recombinant fragment of human ABCB1 (AA: 632-693) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5243
Other Names	Multidrug resistance protein 1, 3.6.3.44, ATP-binding cassette sub-family B member 1, P-glycoprotein 1, CD243, ABCB1, MDR1, PGY1
Dilution	WB~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ABCB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABCB1 (HGNC:40)
Synonyms	MDR1, PGY1
Function	Translocates phospholipids and drugs across the membrane (PubMed:2897240, PubMed:35970996, PubMed:8898203, PubMed:9038218, PubMed:35507548). Catalyzes the flop of phospholipids from the cytoplasmic to the exoplasmic leaflet of the apical membrane. Participates mainly to the flop of phosphatidylcholine, phosphatidylethanolamine, beta-D-glucosylceramides and sphingomyelins (PubMed:8898203). Energy-dependent efflux pump responsible for decreased drug accumulation in multidrug-resistant cells (PubMed:2897240, PubMed:35970996, PubMed:9038218). May contribute to hepatobiliary and renal excretion of etiocholanolone-3-glucuronate. Appears to have very low activity toward testosterone, androsterone and dihydrotestosterone glucuronates.
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00441} Apical cell membrane. Cytoplasm Note=ABCB1 localization is influenced by C1orf115 expression levels (plasma membrane versus cytoplasm). Localized to the apical membrane of enterocytes (PubMed:28408210).
Tissue Location	Expressed in small intestine (PubMed:28408210). Expressed in liver, kidney and brain.

Background

This gene encodes a bifunctional signal transduction molecule. Dopaminergic and glutamatergic receptor stimulation regulates its phosphorylation and function as a kinase or phosphatase inhibitor. As a target for dopamine, this gene may serve as a therapeutic target for neurologic and psychiatric disorders. Multiple transcript variants encoding different isoforms have been found for this gene. ;

References

1. Pharmacol Rep. 2012;64(6):1560-6. 2. J Cancer Res Ther. 2012 Apr-Jun;8(2):226-31.

Images

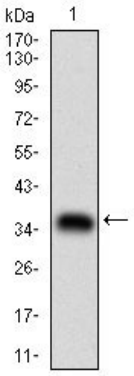
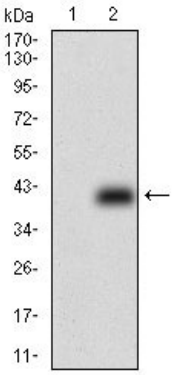


Figure 1: Western blot analysis using ABCB1 mAb against human ABCB1 (AA: 632-693) recombinant protein. (Expected MW is 32.4 kDa)

Figure 2: Western blot analysis using ABCB1 mAb against HEK293 (1) and ABCB1 (AA: 632-693)-hIgGFc transfected HEK293 (2) cell lysate.



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