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ABCB1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1888a

Product Information

Application	WB, E
Primary Accession	P08183
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6G11C12
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

The protein encoded by this gene is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most if not all of the biological effects of this cytokine. Ligand binding activates the receptor kinase through a process of oligomerization and transphosphorylation. The encoded protein is a tyrosine kinase transmembrane receptor and member of the CSF1/PDGF receptor family of tyrosine-protein kinases. Mutations in this gene have been associated with a predisposition to myeloid malignancy. The first intron of this gene contains a transcriptionally inactive ribosomal protein L7 processed pseudogene oriented in the opposite direction. ; ; ; ;

References

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

Images

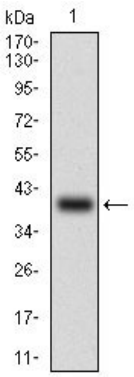

Figure 1: Western blot analysis using ABCB1 mAb against human ABCB1 (AA: 632-693) recombinant protein. (Expected MW is 32.4 kDa)

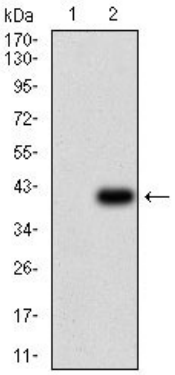

Figure 2: Western blot analysis using ABCB1 mAb against HEK293 (1) and ABCB1 (AA: 632-693)-hIgGFc transfected HEK293 (2) cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.