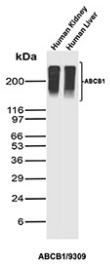
CD243 Antibody / Multidrug Resistance 1 / ABCB1 [clone ABCB1/9309] (V5969)

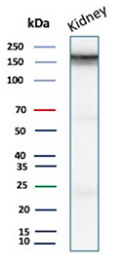
Catalog No.	Formulation	Size
V5969-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5969-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5969SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

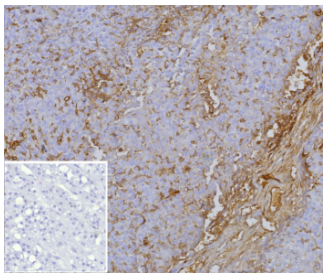
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ABCB1/9309
Purity	Protein G affinity
UniProt	P08183
Localization	Apical cell membrane, Cell membrane, Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western Blot: 2-4ug/ml
Limitations	This CD243/Multidrug Resistance 1 antibody is available for research use only.



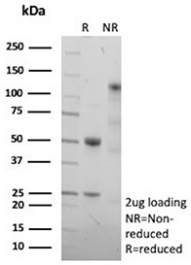
Western blot analysis of CD243 / Multidrug Resistance 1 antibody in human tissues. Western blot was performed using CD243 / Multidrug Resistance 1 antibody (clone ABCB1/9309) on human kidney and human liver tissue lysates. A strong immunoreactive band is detected at approximately 170 kDa in both samples, consistent with the predicted molecular weight of ABCB1, also known as p170 or P-glycoprotein. The band appears broad and slightly diffuse, which is consistent with the extensively glycosylated nature of Multidrug Resistance 1 and its membrane-associated processing. The detected signal corresponds to the predicted molecular weight under reducing conditions. ABCB1 is physiologically enriched in kidney proximal tubules and liver canalicular membranes, and the prominent band intensity in these tissues supports specific detection of endogenous CD243.



Western blot analysis of CD243 / Multidrug Resistance 1 antibody in human kidney. Western blot was performed using CD243 / Multidrug Resistance 1 antibody (clone ABCB1/9309) on human kidney tissue lysate. A prominent immunoreactive band is detected at approximately 170 kDa, consistent with the predicted molecular weight of ABCB1, also known as p170 or P-glycoprotein. The band displays a slightly diffuse appearance, which is consistent with the heavily glycosylated nature of Multidrug Resistance 1 and its membrane-associated processing. The detected signal corresponds to the predicted molecular weight under reducing conditions. Strong expression in kidney tissue aligns with the known enrichment of ABCB1 in proximal tubular epithelial cells, supporting specific detection of endogenous CD243.



Immunohistochemistry analysis of CD243 / Multidrug Resistance 1 antibody in human adrenal gland. FFPE human adrenal gland tissue was stained with CD243 / Multidrug Resistance 1 antibody (clone ABCB1/9309). HRP-DAB brown chromogenic signal is observed predominantly along the plasma membrane of adrenal cortical cells, producing a distinct membranous staining pattern consistent with the known localization of the p170 ABCB1 drug efflux transporter. Cortical cell populations demonstrate variable membrane-associated staining intensity, while stromal elements show minimal background signal. The inset negative control using PBS instead of primary antibody shows no specific brown staining. Nuclei are counterstained blue. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95oC followed by cooling at room temperature prior to antibody incubation.



SDS-PAGE Analysis of Purified CD243/Multidrug Resistance 1 antibody (ABCB1/9309). Confirmation of Purity and Integrity of Antibody.

Description

CD243 antibody, also known as Multidrug Resistance 1 antibody, recognizes a plasma membrane-associated ATP-dependent efflux transporter encoded by the ABCB1 gene. CD243 is the cluster of differentiation designation for the protein commonly referred to as P-glycoprotein and Multidrug Resistance 1. It belongs to the ATP-binding cassette transporter superfamily and is predominantly localized to the apical membrane of polarized epithelial cells. Physiologic expression is observed in intestine, liver canalicular membranes, kidney proximal tubules, placental trophoblasts, and endothelial cells of the blood-brain barrier, where it functions as a protective xenobiotic export pump.

Multidrug Resistance 1 actively transports a wide range of structurally unrelated compounds out of cells using energy derived from ATP hydrolysis. By reducing intracellular accumulation of cytotoxic agents, CD243 plays a central role in the development of chemotherapeutic resistance in multiple malignancies. CD243 antibody is frequently used in oncology research to evaluate drug resistance phenotypes, tumor efflux capacity, and therapeutic response prediction. In hematologic and flow cytometry contexts, CD243 is recognized as a cell surface marker associated with drug-resistant populations.

Structurally, Multidrug Resistance 1 contains two transmembrane domains that create the substrate translocation pathway and two cytoplasmic nucleotide-binding domains responsible for ATP binding and hydrolysis. ATP-driven conformational changes enable substrate extrusion across the membrane. The protein is glycosylated and undergoes post-translational processing that influences membrane targeting and stability. In polarized tissues, CD243 is enriched at the luminal surface, supporting directional efflux into bile, urine, or intestinal lumen.

Overexpression of CD243 has been documented in breast, ovarian, colorectal, and hematologic cancers following exposure to chemotherapeutic agents. Elevated expression is associated with decreased intracellular drug retention and reduced treatment efficacy. Beyond oncology, Multidrug Resistance 1 contributes to pharmacokinetics, blood-brain barrier integrity, and toxin clearance. Clone ABCB1/9309 recognizes CD243 and is suitable for detecting Multidrug Resistance 1 expression in relevant research applications.

Application Notes

Optimal dilution of the CD243/Multidrug Resistance 1 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (around amino acids 500-700) of human ABCB1 protein (exact sequence is proprietary) was used as the immunogen for the CD243/Multidrug Resistance 1 antibody.

Storage

CD243/Multidrug Resistance 1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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