abcam

ab272340

APC Anti-P Glycoprotein antibody [UIC2]

Anti-P Glycoprotein antibody [UIC2] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [UIC2] is a mouse monoclonal antibody cited in 19 publications.

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Key facts

Isotype	IgG2a
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing ABCB1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P08183
Clone number	UIC2
Purification technique	Size-exclusion chromatography
Light chain type	kappa
Purification notes	Purified from TCS.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	The reagent is designed for analysis of human blood cells using 10 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.

Target data

See full target information ABCB1

Function	Translocates drugs and phospholipids 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	P-glycoprotein also known as P-gp MDR1 transporter or ABCB1 is a well-characterized efflux transporter with a molecular mass of approximately 170 kDa. This protein is expressed in various normal tissues such as the liver intestine kidney blood-brain barrier and placenta. It is located on the cell membrane where it functions to expel a wide variety of substrates out of cells using energy derived from ATP hydrolysis. This capability of pumping out toxins and xenobiotics makes P-glycoprotein an important player in cellular detoxification.
Biological function summary	P-glycoprotein acts as a protective mechanism against toxic substances and drugs within the body. It is a member of the ATP-binding cassette (ABC) transporter family which is critical for their ability to transport molecules across membranes.

	P-glycoprotein is not typically part of a larger protein complex but can interact with other membrane proteins to facilitate its function. Its role in drug metabolism and excretion is vital for maintaining the balance and elimination of harmful substances.
Pathways	P-glycoprotein plays a significant role in the pharmacokinetics of drugs within the body. This transporter is involved in the multi-drug resistance (MDR) pathway which impacts the efficacy of chemotherapeutic agents. P-glycoprotein also interacts with other proteins like CYP3A4 which is involved in the metabolism of many drugs. These interactions affect the concentration and distribution of therapeutic agents contributing to the body's overall drug response.
Associated diseases and disorders	P-glycoprotein is closely associated with multi-drug resistance in cancer where its overexpression can lead to reduced effectiveness of chemotherapy. It is also implicated in disorders of the central nervous system like epilepsy where it affects drug delivery to the brain. The protein has connections with CYP3A4 in these contexts where both together influence drug metabolism and efficacy complicating treatment regimens and therapeutic outcomes in these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

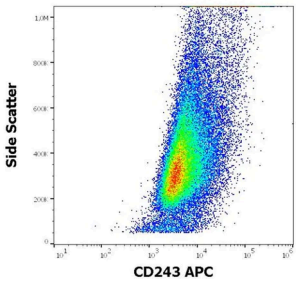
We do not recommend this combination. It is not covered by our product promise.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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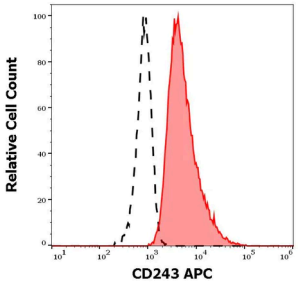
2 product images



Flow Cytometry - APC Anti-P Glycoprotein antibody [UIC2] (ab272340)

P Glycoprotein Flow Cytometry staining using mouse Anti-P Glycoprotein antibody

Flow cytometry surface staining pattern of HepG2 (Human liver hepatocellular carcinoma cell line) cell suspension stained using ab272340 at 10 µl reagent per milion cells in 100 µl of cell suspension. P Glycoprotein also known as CD243.



Flow Cytometry - APC Anti-P Glycoprotein antibody [UIC2] (ab272340)

P Glycoprotein Flow Cytometry staining using mouse Anti-P Glycoprotein antibody

Separation of HepG2 (Human liver hepatocellular carcinoma cell line) cells (red-filled) from human peripheral whole blood cells (black-dashed) in flow cytometry analysis (surface staining) stained using ab272340 at 10 µl reagent per milion cells in 100 µl of cell suspension. P Glycoprotein also known as CD243.

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