

Anti-MRP1 Picoband Antibody

Catalog # ABO12895

Product Information

Application	WB
Primary Accession	P33527
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Multidrug resistance-associated protein 1(ABCC1) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4363
Other Names	Multidrug resistance-associated protein 1, ATP-binding cassette sub-family C member 1, Leukotriene C(4) transporter, LTC4 transporter, ABCC1, MRP, MRP1
Calculated MW	171591
Application Details	Western blot, 0.1-0.5 µg/ml, Human
Subcellular Localization	Cell membrane ; Multi-pass membrane protein .
Tissue Specificity	Lung, testis and peripheral blood mononuclear cells.
Source	Eukaryota
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human MRP1 (1493-1528aa DYTRVIVLDKGIEYEGAPSDLLQQRGLFYSSMAKDA), different from the related mouse sequence by five amino acids, and from the related rat sequence by four amino acids.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information

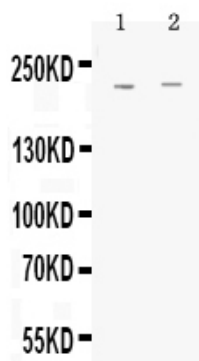
Name	ABCC1 (HGNC:51)
Synonyms	MRP, MRP1
Function	Mediates export of organic anions and drugs from the cytoplasm (PubMed: 10064732 , PubMed: 11114332 , PubMed: 16230346 , PubMed: 7961706 , PubMed: 9281595). Mediates ATP-dependent transport of glutathione and glutathione conjugates, leukotriene C4, estradiol-17-beta-o-glucuronide, methotrexate, antiviral drugs and other xenobiotics (PubMed: 10064732 , PubMed: 11114332 , PubMed: 16230346 , PubMed: 7961706 , PubMed: 9281595). Confers resistance to anticancer drugs by decreasing accumulation of drug in cells, and by mediating ATP- and GSH-dependent drug export (PubMed: 9281595). Hydrolyzes ATP with low efficiency (PubMed: 16230346). Catalyzes the export of sphingosine 1-phosphate from mast cells independently of their degranulation (PubMed: 17050692). Participates in inflammatory response by allowing export of leukotriene C4 from leukotriene C4-synthesizing cells (By similarity). Mediates ATP-dependent, GSH-independent cyclic GMP-AMP (cGAMP) export (PubMed: 36070769). Thus, by limiting intracellular cGAMP concentrations negatively regulates the cGAS-STING pathway (PubMed: 36070769). Exports S-geranylgeranyl-glutathione (GGG) in lymphoid cells and stromal compartments of lymphoid organs. ABCC1 (via extracellular transport) with GGT5 (via GGG catabolism) establish GGG gradients within lymphoid tissues to position P2RY8-positive lymphocytes at germinal centers in lymphoid follicles and restrict their chemotactic transmigration from blood vessels to the bone marrow parenchyma (By similarity). Mediates basolateral export of GSH-conjugated R- and S-prostaglandin A2 diastereomers in polarized epithelial cells (PubMed: 9426231).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein
Tissue Location	Lung, testis and peripheral blood mononuclear cells

Background

Multidrug resistance-associated protein 1 (MRP1) is a protein that in humans is encoded by the ABCC1 gene. The 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 full transporter is a member of the MRP subfamily which is involved in multi-drug resistance. This protein functions as a multispecific organic anion transporter, with oxidized glutathione, cysteinyl leukotrienes, and activated aflatoxin B1 as substrates. This protein also transports glucuronides and sulfate conjugates of steroid hormones and bile salts. Alternatively spliced variants of this gene have been described but their full-length nature is unknown.

Images

Figure 1. Western blot analysis of MRP1 using anti-MRP1 antibody (ABO12895). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing



conditions.lane 1: HELA whole cell lysates,lane 2: A549 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MRP1 antigen affinity purified polyclonal antibody (Catalog # ABO12895) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for MRP1 at approximately 220KD. The expected band size for MRP1 is at 220KD.

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