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MRP1 Antibody

Rabbit mAb
Catalog # AP91308

Product Information

Application	WB, FC
Primary Accession	P33527
Reactivity	Human
Clonality	Monoclonal
Other Names	ABC29; Abcc1; GSX; Leukotriene C(4) transporter; LTC4 transporter; MRP1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	171591

Additional Information

Dilution	WB 1:500~1:2000 FC 1:20
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MRP1
Description	Mediates export of organic anions and drugs from the cytoplasm. Mediates ATP-dependent transport of glutathione and glutathione conjugates, leukotriene C4, estradiol-17-beta-o-glucuronide, methotrexate, antiviral drugs and other xenobiotics. Confers resistance to anticancer drugs. Hydrolyzes ATP with low efficiency.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	ABCC1 (HGNC:51)
Function	ATP-dependent transporter of the ATP-binding cassette (ABC) family that hydrolyzes ATP to enable the active transport of organic anions conjugated with glutathione, glucuronate or sulfate. Operates at the plasma membrane where it mediates the efflux of substrates from the cytoplasm into the extracellular space. The rate of transport is in some way coupled to the reduced glutathione (GSH) intracellular levels (PubMed:10064732, PubMed:11114332, PubMed:16230346, PubMed:8640791, PubMed:7961706, PubMed:9281595). Mediates the systemic release of glutathione-conjugated leukotriene C4 (LTC4) from myeloid cells such as mast cells, as part of the inflammatory response (PubMed:10064732, PubMed:11114332, PubMed:7961706, PubMed:8640791). 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). Can export both GSH and its oxidized form GSSG in a protective mechanism that limits cellular damage especially during oxidative stress. Regulates GSH and GSSG release from astrocytes to maintain glutathione redox equilibrium in the brain (PubMed:16230346, PubMed:8640791). Transports signaling molecules. Appears to selectively recognize cyclic 2'3'-GMP-AMP (cGAMP) produced by mammals but not 3'3'-cGAMP produced by bacteria. Mediates 2'3'-cGAMP export and limits intracellular cGAMP- mediated cGAS-STING signaling and type I interferon synthesis (PubMed:36070769, PubMed:39765229). Exports sphingosine 1-phosphate from mast cells independently of their degranulation (PubMed:17050692). Confers resistance to anticancer drugs by mediating ATP- and GSH- dependent drug export (PubMed:9281595). Similarly to MRP2, transports various steroids, bile acids and bilirubin conjugates (PubMed:8640791, PubMed:9355767).

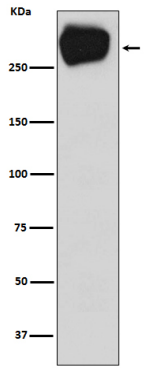
Cellular Location

Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein

Tissue Location

Lung, testis and peripheral blood mononuclear cells

Images



Western blot analysis of MRP1 expression in A431 cell lysate.

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