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Anti-MRP3 Antibody

Catalog # AP59752

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O15438
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	169343

Additional Information

Gene ID	8714
Other Names	CMOAT2; MLP2; MRP3; Canalicular multispecific organic anion transporter 2; ATP-binding cassette sub-family C member 3; Multi-specific organic anion transporter D; MOAT-D; Multidrug resistance-associated protein 3
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human MRP3. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IP (1/10 - 1/100) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ABCC3 (HGNC:54)
Synonyms	CMOAT2, MLP2, MRP3
Function	ATP-dependent transporter of the ATP-binding cassette (ABC) family that hydrolyzes ATP to enable active transport of substrates conjugated with glucuronate, glutathione or sulfate. Operates at basolateral membranes of polarized cells such as hepatocytes and intestinal epithelial cells, where it mediates the efflux of conjugated substrates from intestine and liver into the bloodstream (PubMed:10359813, PubMed:11581266, PubMed:15083066, PubMed:29175180, PubMed:30959153, PubMed:31704245, PubMed:39993711, PubMed:37485728). Involved in enterohepatic recirculation of steroid glucuronates. Shares substrate specificity with MRP2, displaying higher affinity for both estrogen and androgen glucuronates such as 17beta-estradiol, estrone, testosterone and 5alpha-dihydrotestosterone glucuronates (PubMed:29175180, PubMed:30959153, PubMed:31704245,

PubMed:37485728). Involved in sinusoidal efflux of mono- and bis-glucuronidated bilirubin from hepatocytes into the blood for renal uptake and excretion (PubMed:15083066). May selectively transport steroid sulfate conjugates. Has transporter activity toward androgen sulfates such as androsterone and dehydroepiandrosterone sulfates but is inactive toward estrone 3-sulfate (PubMed:29175180, PubMed:39993711). Can transport various bile acid conjugates such as taurocholate, glycocholate, taurochenodeoxycholate-3-sulfate and taurolithocholate-3-sulfate. Does not contribute substantially to bile acids physiology, but provides an alternative route for the export of bile acids and glucuronate conjugates from cholestatic hepatocytes to avoid liver damage (By similarity). Can also transport glutathione conjugates such as leukotriene C4 (LTC4) (PubMed:11581266). Transports various xenobiotics. Confers resistance to anticancer drugs, methotrexate, tenoposide and etoposide, by decreasing accumulation of these drugs in cells (PubMed:10359813, PubMed:11581266). May contribute to the transport of organic compounds in testes across the blood-testis-barrier (Probable).

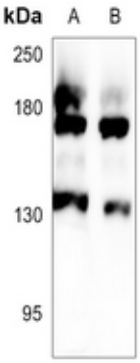
Cellular Location

Basolateral cell membrane; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Note=Localized to the basolateral membrane of enterocytes (PubMed:28408210). Localized to the basal membrane of Sertoli cells (PubMed:35307651).

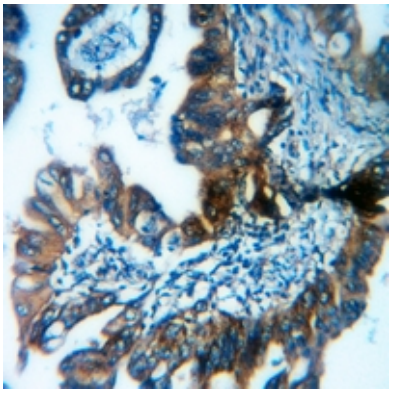
Tissue Location

Mainly expressed in the liver. Also expressed in small intestine, colon, prostate, testis, brain and at a lower level in the kidney. In testis, localized to peritubular myoid cells, Leydig cells, along the basal membrane of Sertoli cells and moderately in the adluminal compartment of the seminiferous tubules (PubMed:35307651)

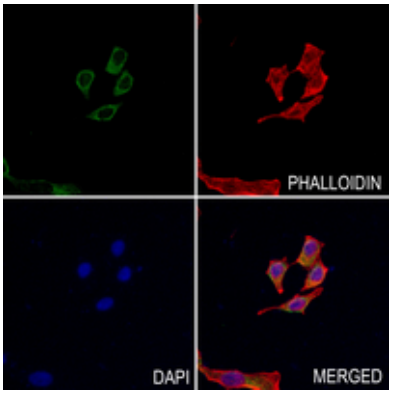
Images



Western blot analysis of MRP3 expression in HepG2 (A), LO2 (B) whole cell lysates. (Predicted band size: 169 kD; Observed band size: 169; 137 kD)



Immunohistochemical analysis of MRP3 staining in human colorectal cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of MRP3 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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