10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-MRP1 / ABCC1 Antibody

Mouse Monoclonal Antibody
Catalog # AH13403

## Product Information

| | |
|---|---|
| **Application** | WB, IF, FC |
| **Primary Accession** | P33527 |
| **Other Accession** | 391464 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse / IgG2a |
| **Clone Names** | MRP1/1344 |
| **Calculated MW** | 171591 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 4363 |
| **Other Names** | ABC29; ABCC1; ATP binding cassette sub family C (CFTR/MRP) member 1; ATP-binding cassette sub-family C member 1; GSX; Leukotriene C(4) transporter; LTC4 transporter; Multidrug resistance-associated protein 1 (MRP1) |
| **Application Note** | Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1ug/ml) ,Optimal dilution for a specific application should be determined. |
| **Format** | 200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml. |
| **Storage** | Store at 2 to 8°C.Antibody is stable for 24 months. |
| **Precautions** | Anti-MRP1 / ABCC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## 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 |

## Background

The two members of the large family of ABC transporters known to confer multidrug resistance in human cancer cells are the MDR1 P-glycoprotein and the multidrug-resistance protein MRP1. MRP1 is an integral membrane protein that contains an MDR-like core, an N-terminal membrane-bound region and a cytoplasmic linker, and it is expressed in various cerebral cells, as well as in lung, testis and peripheral blood.

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