Background: Multidrug resistance-associated protein 1 (MRP1/ABCC1) is a member of the MRP subfamily of ATP-binding cassette (ABC) transporters (1). MRP1/ABCC1 protein functions as an organic anion transporter. It has a broad range of substrates, including antineoplastic or therapeutic agents and the glutathione (GSH) conjugates of these compounds. MRP1/ABCC1 also transports physiological substrates such as folates, GSH and GSH disulfide (GSSG) conjugates of steroids, leukotrienes, and prostaglandins (2,3).

Although MRP1/ABCC1 is generally expressed in normal tissue, upregulation of MRP1/ABCC1 has been found in a variety of solid tumors, including small cell lung cancer, breast cancer, and prostate cancer (1,4,5). Research studies show that overexpression of MRP1/ABCC1 facilitates the elimination of therapeutic agents from cancer cells and confers drug resistance in those patients. Research studies also show that elevated expression of MRP1/ABCC1 is a negative prognostic marker for breast cancer and small cell lung cancer, as the level of MRP1/ABCC1 is a negative prognostic marker for cancer cells and confers drug resistance in those patients (6-10).

Specificity/Sensitivity: MRP1/ABCC1 (D708N) Rabbit mAb recognizes endogenous levels of total MRP1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val273 of human ABCC1 protein.

Recommended Antibody Dilutions:
- Western blotting 1:1000
- Immunoprecipitation 1:100
- Immunofluorescence (IF-IC) 1:200

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

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Immunoprecipitation of MRP1/ABCC1 from Hep G2 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or MRP1/ABCC1 (D7O8N) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using MRP1/ABCC1 (D7O8N) Rabbit mAb.

Western blot analysis of extracts from Hep G2 and SK-MEL-2 cells using MRP1/ABCC1 (D7O8N) Rabbit mAb (upper) and β-Actin (13E5) Rabbit mAb #4970 (lower).