

# MRP5 (E-10): sc-376965

## 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. The MRP gene family also includes MRP2, which is alternatively designated cMOAT (for canalicular multispecific organic anion transporter) and MRP3, which are both conjugate export pumps expressed predominantly in hepatocytes. MRP2 localizes exclusively to the apical membrane and is constitutively expressed at a high level in normal liver cells. Conversely, MRP3 localizes to the basolateral membrane where it also mediates the transport of the organic anion S-(2,4-dinitrophenyl)-glutathione toward the basolateral side of the membrane. MRP3 is normally expressed at comparatively lower levels than MRP2 and increases only when secretion across the apical membrane by MRP2 is impaired. MRP6 protein is highly expressed in liver and kidney, whereas MRP4 and MRP5 are detected in various tissues yet at much lower levels of expression.

## REFERENCES

1. Versantvoort, C.H., et al. 1995. Regulation by glutathione of drug transport in multidrug-resistant human lung tumour cell lines overexpressing multidrug resistance-associated protein. *Br. J. Cancer* 72: 82-89.
2. Keppler, D., et al. 1997. Hepatic canalicular membrane 5: expression and localization of the conjugate export pump encoded by the MRP2 (cMRP/cMOAT) gene in liver. *FASEB J.* 11: 509-516.

## CHROMOSOMAL LOCATION

Genetic locus: ABCC5 (human) mapping to 3q27.1; Abcc5 (mouse) mapping to 16 A3.

## SOURCE

MRP5 (E-10) is a mouse monoclonal antibody raised against amino acids 1-100 mapping near the N-terminus of MRP5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MRP5 (E-10) is available conjugated to agarose (sc-376965 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376965 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376965 PE), fluorescein (sc-376965 FITC), Alexa Fluor® 488 (sc-376965 AF488), Alexa Fluor® 546 (sc-376965 AF546), Alexa Fluor® 594 (sc-376965 AF594) or Alexa Fluor® 647 (sc-376965 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376965 AF680) or Alexa Fluor® 790 (sc-376965 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

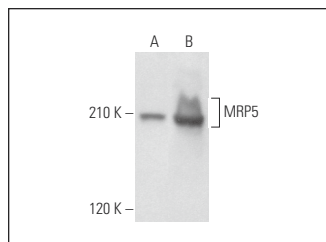
MRP5 (E-10) is recommended for detection of MRP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MRP5 siRNA (h): sc-35965, MRP5 siRNA (m): sc-35966, MRP5 shRNA Plasmid (h): sc-35965-SH, MRP5 shRNA Plasmid (m): sc-35966-SH, MRP5 shRNA (h) Lentiviral Particles: sc-35965-V and MRP5 shRNA (m) Lentiviral Particles: sc-35966-V.

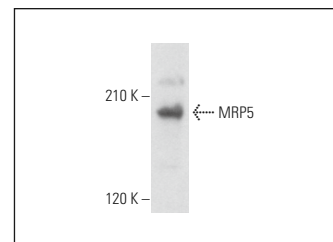
Molecular Weight of MRP5: 185 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, NIH/3T3 whole cell lysate: sc-2210 or PC-12 cell lysate: sc-2250.

## DATA



MRP5 (E-10): sc-376965. Western blot analysis of MRP5 expression in NIH/3T3 (A) and PC-12 (B) whole cell lysates.



MRP5 (E-10): sc-376965. Western blot analysis of MRP5 expression in SK-N-SH whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Chen, S.F., et al. 2015. Meloxicam increases intracellular accumulation of doxorubicin via downregulation of multidrug resistance-associated protein 1 (MRP1) in A549 cells. *Genet. Mol. Res.* 14: 14548-14560.
2. Afrouzian, M., et al. 2018. Role of the efflux transporters BCRP and MRP1 in human placental bio-disposition of pravastatin. *Biochem. Pharmacol.* 156: 467-478.
3. Sun, Y., et al. 2020. Metformin reverses the drug resistance of cisplatin in irradiated CNE-1 human nasopharyngeal carcinoma cells through PECAM-1 mediated MRPs down-regulation. *Int. J. Med. Sci.* 17: 2416-2426.
4. Tasaki, Y., et al. 2021. Cancer-specific targeting of taurine-upregulated gene 1 enhances the effects of chemotherapy in pancreatic cancer. *Cancer Res.* 81: 1654-1666.
5. Liu, J., et al. 2022. IL25 enhanced colitis-associated tumorigenesis in mice by upregulating transcription factor GLI1. *Front. Immunol.* 13: 837262.
6. Chang, C.A., et al. 2022. Ontogeny and vulnerabilities of drug-tolerant persists in HER2+ breast cancer. *Cancer Discov.* 12: 1022-1045.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.