SANTA CRUZ BIOTECHNOLOGY, INC.

MRP5 (H-100): sc-20769

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The two members of the large family of ABC transporters known to confer multidrug resistance in human cancer cells are the Mdr-1 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 multi-drug resistance-associated protein. Br. J. Cancer 72: 82-89.
2. Keppler, D. and Konig, J. 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.
3. Kool, M., et al. 1997. Analysis of expression of cMOAT (MRP2), MRP3, MRP4, and MRP5, homologues of the multidrug resistance-associated protein gene (MRP1), in human cancer cell lines. Cancer Res. 57: 3537-3547.
4. Bakos, E., et al. 1998. Functional multidrug resistance protein (MRP1) lacking the N-terminal transmembrane domain. J. Biol. Chem. 273: 32167-32175.

CHROMOSOMAL LOCATION

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

SOURCE

MRP5 (H-100) is a rabbit polyclonal antibody raised against amino acids 1-100 mapping near the N-terminus of MRP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

MRP5 (H-100) is recommended for detection of MRP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

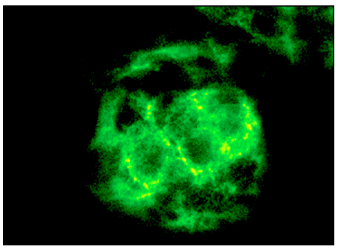
MRP5 (H-100) is also recommended for detection of MRP5 in additional species, including equine, canine, bovine and porcine.

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: A549 cell lysate: sc-2413, SK-N-SH cell lysate: sc-2410 or HeLa whole cell lysate: sc-2200.

DATA



MRP5 (H-100): sc-20769. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Roberts, L.M., et al. 2008. Subcellular localization of transporters along the rat blood-brain barrier and blood-cerebral-spinal fluid barrier by *in vivo* biotinylation. Neuroscience 155: 423-438.
2. Kucka, M., et al. 2009. Dependence of multidrug resistance protein-mediated cyclic nucleotide efflux on the background sodium conductance. Mol. Pharmacol. 77: 270-279.
3. Gao, A.M., et al. 2013. Apigenin sensitizes doxorubicin-resistant hepatocellular carcinoma BEL-7402/ADM cells to doxorubicin via inhibiting PI3K/Akt/Nrf2 pathway. Carcinogenesis 34: 1806-1814.