SANTA CRUZ BIOTECHNOLOGY, INC.

MRP2 (H-17): sc-5770

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 is highly expressed in liver and kidney, whereas MRP4 and MRP5 are detected in various tissues, yet at much lower levels of expression.

CHROMOSOMAL LOCATION

Genetic locus: ABCC2 (human) mapping to 10q24.2; Abcc2 (mouse) mapping to 19 C3.

SOURCE

MRP2 (H-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of MRP2 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.

Blocking peptide available for competition studies, sc-5770 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP2 (H-17) is recommended for detection of MRP2 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), immunohistochemistry (including paraffin-embedded sections) (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 MRP2 siRNA (h): sc-35963, MRP2 siRNA (m): sc-35964, MRP2 shRNA Plasmid (h): sc-35963-SH, MRP2 shRNA Plasmid (m): sc-35964-SH, MRP2 shRNA (h) Lentiviral Particles: sc-35963-V and MRP2 shRNA (m) Lentiviral Particles: sc-35964-V.

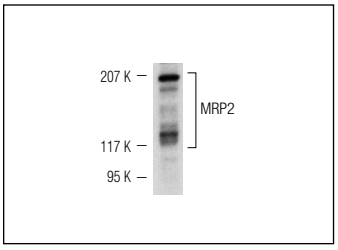
Molecular Weight of MRP2: 190-200 kDa.

Positive Controls: A549 cell lysate: sc-2413.

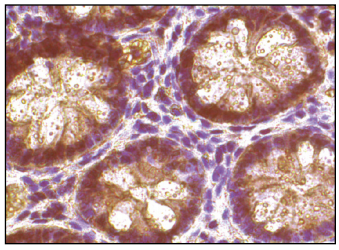
STORAGE

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

DATA



MRP2 (H-17): sc-5770. Western blot analysis of MRP2 expression in A549 whole cell lysate.



MRP2 (H-17): sc-5770. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Tanaka, Y., et al. 2003. Expressions of hepatobiliary organic anion transporters and bilirubin-conjugating enzyme in differentiating embryonic stem cells. Biochem. Biophys. Res. Commun. 309: 324-330.
2. Obata, H., et al. 2006. Association between single nucleotide polymorphisms of drug resistance-associated genes and response to chemotherapy in advanced ovarian cancer. Anticancer Res. 26: 2227-2232.
3. Chuu, J.J., et al. 2007. Effects of paclitaxel and doxorubicin in histocultures of hepatocelular carcinomas. J. Biomed. Sci. 14: 233-244.
4. Osabe, M., et al. 2008. Expression of hepatic UDP-glucuronosyltransferase 1A1 and 1A6 correlated with increased expression of the nuclear constitutive androstane receptor and peroxisome proliferator-activated receptor α in male rats fed a high-fat and high-sucrose diet. Drug Metab. Dispos. 36: 294-302.
5. Ren, D., et al. 2011. Brusatol enhances the efficacy of chemotherapy by inhibiting the Nrf2-mediated defense mechanism. Proc. Natl. Acad. Sci. USA 108: 1433-1438.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.