SANTA CRUZ BIOTECHNOLOGY, INC.

MRP3 (H-16): sc-5774

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 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.

CHROMOSOMAL LOCATION

Genetic locus: ABCC3 (human) mapping to 17q21.33; Abcc3 (mouse) mapping to 11 D.

SOURCE

MRP3 (H-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MRP3 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-5774 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP3 (H-16) is recommended for detection of MRP3 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).

MRP3 (H-16) is also recommended for detection of MRP3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MRP3 siRNA (h): sc-40748, MRP3 siRNA (m): sc-40749, MRP3 shRNA Plasmid (h): sc-40748-SH, MRP3 shRNA Plasmid (m): sc-40749-SH, MRP3 shRNA (h) Lentiviral Particles: sc-40748-V and MRP3 shRNA (m) Lentiviral Particles: sc-40749-V.

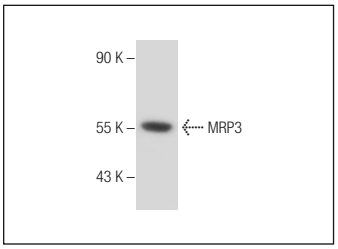
Molecular Weight of MRP3 isoforms: 169/137/55/32/65 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

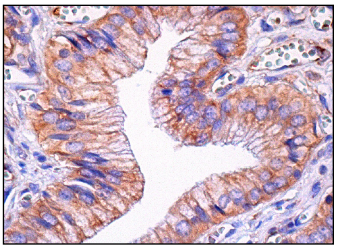
STORAGE

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

DATA



MRP3 (H-16): sc-5774. Western blot analysis of MRP3 expression in MIA PaCa-2 whole cell lysate.



MRP3 (H-16): sc-5774. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and 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. Simon, F.R., et al. 2004. Multihormonal regulation of hepatic sinusoidal Ntcp gene expression. Am. J. Physiol. Gastrointest. Liver Physiol. 287: G782-G794.
3. Riganti, C., et al. 2005. Nitric oxide reverts the resistance to doxorubicin in human colon cancer cells by inhibiting the drug efflux. Cancer Res. 65: 516-525.
4. Riganti, C., et al. 2006. Statins revert doxorubicin resistance via nitric oxide in malignant mesothelioma. Int. J. Cancer 119: 17-27.
5. Chuu, J.J., et al. 2007. Effects of paclitaxel and doxorubicin in histocultures of hepatocelular carcinomas. J. Biomed. Sci. 14: 233-244.
6. Skrypek, N., et al. 2012. The MUC4 mucin mediates gemcitabine resistance of human pancreatic cancer cells via the concentrative nucleoside transporter family. Oncogene. E-published.

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.

MONOS Satisfaction Guaranteed

Try **MRP3 (M3II-21): sc-59612**, our highly recommended monoclonal aternative to MRP3 (H-16).