

# MRP3 (D-15): sc-5775

## 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.
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.
5. Ortiz, D.F., et al. 1999. MRP3, a new ATP-binding cassette protein localized to the canalicular domain of the hepatocyte. *Am. J. Physiol.* 276: 1493-1500.

## CHROMOSOMAL LOCATION

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

## SOURCE

MRP3 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-5775 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MRP3 (D-15) 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), 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).

MRP3 (D-15) is also recommended for detection of MRP3 in additional species, including equine and canine.

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 or COLO 320DM cell lysate: sc-2226.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Mutch, D.M., et al. 2004. Regional variations in ABC transporter expression along the mouse intestinal tract. *Physiol. Genomics* 17: 11-20.
2. Bochkis, I.M., et al. 2008. Hepatocyte-specific ablation of Foxa2 alters bile acid homeostasis and results in endoplasmic reticulum stress. *Nat. Med.* 14: 828-836.

## 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.



Try **MRP3 (M3I1-21): sc-59612**, our highly recommended monoclonal alternative to MRP3 (D-15).