SANTA CRUZ BIOTECHNOLOGY, INC.

MRP2 (M2III-5): sc-59611

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 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 (M2III-5) is a mouse monoclonal antibody raised against a fusion protein of MRP2 of rat origin.

PRODUCT

Each vial contains 500 µl culture supernatant containing IgG_{2b} with < 0.1% sodium azide and 0.7% stabilizer protein.

APPLICATIONS

MRP2 (M2III-5) is recommended for detection of MRP2 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200) and flow cytometry (10-20 µl per 1 x 10^6 cells); non cross-reactive with human MDR1, MRP1, MRP3 or MRP5.

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.

PROTOCOLS

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

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

SELECT PRODUCT CITATIONS

1. Jin, Q.R., et al. 2009. Decreased urinary secretion of belotecan in folic acid-induced acute renal failure rats due to down-regulation of Oat1 and Bcrp. Xenobiotica 39: 711-721.
2. Zhou, Z.X., et al. 2011. Beneficial effects of colchicine on 17α-ethynylestradiol-induced cholestasis in rats. Arzneimittelforschung 61: 173-179.
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4. Wang, T., et al. 2014. Resveratrol effectively attenuates α-naphthylisothiocyanate-induced acute cholestasis and liver injury through choleretic and anti-inflammatory mechanisms. Acta Pharmacol. Sin. 35: 1527-1536.
5. Dai, P., et al. 2015. Multidrug resistance-associated protein 2 is involved in the efflux of *Aconitum* alkaloids determined by MRP2-MDCKII cells. Life Sci. 127: 66-72.
6. Campos-Arroyo, D., et al. 2016. Probenecid sensitizes neuroblastoma cancer stem cells to cisplatin. Cancer Invest. 34: 155-166.
7. Liu, B., et al. 2017. Glutamine attenuates obstructive cholestasis in rats via farnesoid X receptor-mediated regulation of Bsep and MRP2. Can. J. Physiol. Pharmacol. 95: 215-223.
8. Zheng, X., et al. 2018. Glycyrrhetic acid derivative TY501 protects against lithocholic acid-induced cholestasis. Drug Res. 68: 370-377.
9. Afroz, F., et al. 2018. Evidence that decreased expression of sinusoidal bile acid transporters accounts for the inhibition by rapamycin of bile flow recovery following liver ischemia. Eur. J. Pharmacol. 838: 91-106.
10. Holmila, R.J., et al. 2018. Mitochondria-targeted probes for imaging protein sulfenylation. Sci. Rep. 8: 6635.
11. Bolleyn, J., et al. 2020. Genetic and epigenetic modification of rat liver progenitor cells via HNF4α transduction and 5' azacytidine treatment: an integrated miRNA and mRNA expression profile analysis. Genes 11: 486.
12. Nazmy, E.A., et al. 2021. Nifuroxazide mitigates cholestatic liver injury by synergistic inhibition of Il-6/β-catenin signaling and enhancement of BSEP and MDRP2 expression. Int. Immunopharmacol. 99: 107931.
13. Yan, M., et al. 2021. Glycyrrhetinic acid protects α-naphthylisothiocyanate-induced cholestasis through regulating transporters, inflammation and apoptosis. Front. Pharmacol. 12: 701240.

RESEARCH USE

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