SANTA CRUZ BIOTECHNOLOGY, INC.

MRP4 (F-6): sc-376262

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.

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.

CHROMOSOMAL LOCATION

Genetic locus: ABCC4 (human) mapping to 13q32.1.

SOURCE

MRP4 (F-6) is a mouse monoclonal antibody raised against amino acids 1-280 mapping near the N-terminus of MRP4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MRP4 (F-6) is available conjugated to agarose (sc-376262 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376262 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376262 PE), fluorescein (sc-376262 FITC), Alexa Fluor® 488 (sc-376262 AF488), Alexa Fluor® 546 (sc-376262 AF546), Alexa Fluor® 594 (sc-376262 AF594) or Alexa Fluor® 647 (sc-376262 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376262 AF680) or Alexa Fluor® 790 (sc-376262 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

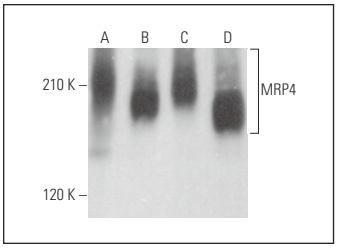
MRP4 (F-6) is recommended for detection of MRP4 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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 MRP4 siRNA (h): sc-40750, MRP4 shRNA Plasmid (h): sc-40750-SH and MRP4 shRNA (h) Lentiviral Particles: sc-40750-V.

Molecular Weight of MRP4: 150 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or HEL 92.1.7 cell lysate: sc-2270.

DATA



MRP4 (F-6): sc-376262. Western blot analysis of MRP4 expression in HeLa (**A**), A549 (**B**), HEL 92.1.7 (**C**) and MDA-MB-231 (**D**) whole cell lysates.

MRP4 (F-6): sc-376262. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Zhou, T., et al. 2014. Expression and localization of p-glycoprotein, multidrug resistance protein 4, and breast cancer resistance protein in the female lower genital tract of human and pigtailed macaque. AIDS Res. Hum. Retroviruses 30: 1106-1116.
2. Afrouzian, M., et al. 2018. Role of the efflux transporters BCRP and MRP1 in human placental bio-disposition of pravastatin. Biochem. Pharmacol. 156: 467-478.
3. Kim, K.H., et al. 2019. Constitutive androstane receptor differentially regulates bile acid homeostasis in mouse models of intrahepatic cholestasis. Hepatol. Commun. 3: 147-159.
4. Nitta, H., et al. 2023. Possible new histological prognostic index for large B-cell lymphoma. J. Clin. Med. 12: 6324.
5. Nitta, H., et al. 2024. A new histology-based prognostic index for aggressive T-cell lymphoma: preliminary results of the "TCL urayasu classification". J. Clin. Med. 13: 3870.

RESEARCH USE

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