SANTA CRUZ BIOTECHNOLOGY, INC.

MRP1 (9): sc-136447

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 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: ABCC1 (human) mapping to 16p13.11.

SOURCE

MRP1 (9) is a mouse monoclonal antibody raised against amino acids 864-952 of MRP1 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.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

MRP1 (9) is recommended for detection of MRP1 of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MRP1 siRNA (h): sc-35962, MRP1 shRNA Plasmid (h): sc-35962-SH and MRP1 shRNA (h) Lentiviral Particles: sc-35962-V.

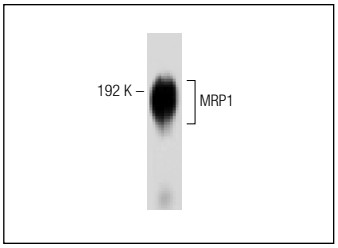
Molecular Weight of MRP1: 190 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, T98G cell lysate: sc-2294 or H69AR whole cell lysate: sc-364382.

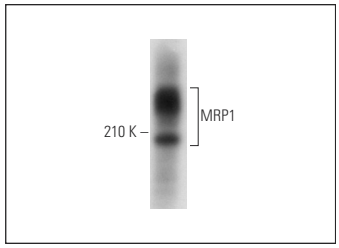
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MRP1 (9): sc-136447. Western blot analysis of MRP1 expression in WI-38 whole cell lysate.



MRP1 (9): sc-136447. Western blot analysis of MRP1 expression in H69AR whole cell lysate.

SELECT PRODUCT CITATIONS

1. Sun, Y., et al. 2016. NFκB signaling plays irreplaceable roles in cisplatin-induced bladder cancer chemoresistance and tumor progression. Int. J. Oncol. 48: 225-234.
2. Lian, W., et al. 2017. AP-2α reverses vincristine-induced multidrug resistance of SGC7901 gastric cancer cells by inhibiting the Notch pathway. Apoptosis 22: 933-941.
3. Liu, C., et al. 2018. Treatment with 20(S)-ginsenoside Rg3 reverses multidrug resistance in A549/DDP xenograft tumors. Oncol. Lett. 15: 4376-4382.
4. Mao, X.M., et al. 2018. Retinoic acid receptor α knockdown suppresses the tumorigenicity of esophageal carcinoma via Wnt/β-catenin pathway. Dig. Dis. Sci. 63: 3348-3358.
5. Yang, C., et al. 2018. Eukaryotic translation initiation factor 3 subunit G (EIF3G) resensitized HCT116/5-Fu to 5-fluorouracil (5-Fu) via inhibition of MRP and MDR1. Onco Targets Ther. 11: 5315-5324.

RESEARCH USE

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

CONJUGATES

See **MRP1 (QCRL-1): sc-18835** for MRP1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.