SANTA CRUZ BIOTECHNOLOGY, INC.

MRP7 (D-19): sc-54542

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The MRP family is represented by nine similar ABC transporters that have the ability to transport structurally diverse lipophilic anions and operate as chemical efflux pumps. MRP7 (multidrug resistance-associated protein 7, ATP-binding cassette subfamily C member 10) is a multi-pass membrane protein that belongs to the ABC transporter family (conjugate transporter subfamily). MRP7 is involved with the ATP-dependent transport of 17β-estradiol-D-17-β-glucuronide ($E_2$17βG). MRP7 is also probably involved in cellular detoxification through its lipophilic anion extrusion capabilities. MRP7 contains two ABC transmembrane type 1 domains and two ABC transporter domains. MRP7 likely has three isoforms. Isoform 2 is the most widely expressed, while isoform 1 is predominately expressed in the spleen.

REFERENCES

1. Hopper, E., et al. 2001. Analysis of the structure and expression pattern of MRP7 (ABCC10), a new member of the MRP subfamily. Cancer Lett. 162: 181-191.
2. Chen, Z.S., et al. 2003. Characterization of the transport properties of human multidrug resistance protein 7 (MRP7, ABCC10). Mol. Pharmacol. 63: 351-358.
3. Hopper-Borge, E., et al. 2004. Analysis of the drug resistance profile of multidrug resistance protein 7 (ABCC10): resistance to docetaxel. Cancer Res. 64: 4927-4930.
4. Dabrowska, M. and Sirotnak, F.M. 2004. Regulation of transcription of the human MRP7 gene. Characteristics of the basal promoter and identification of tumor-derived transcripts encoding additional 5' end heterogeneity. Gene 341: 129-139.
5. Maher, J.M., et al. 2005. Tissue distribution and hepatic and renal ontogeny of the multidrug resistance-associated protein (Mrp) family in mice. Drug Metab. Dispos. 33: 947-955.
6. Weaver, D.A., et al. 2005. ABCC5, ERCC2, XPA and XRCC1 transcript abundance levels correlate with cisplatin chemoresistance in non-small cell lung cancer cell lines. Mol. Cancer 4: 18.

CHROMOSOMAL LOCATION

Genetic locus: ABCC10 (human) mapping to 6p21.1.

SOURCE

MRP7 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MRP7 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-54542 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MRP7 (D-19) is recommended for detection of MRP7 of 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), 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).

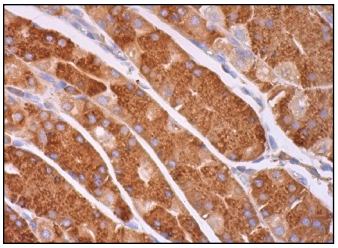
Suitable for use as control antibody for MRP7 siRNA (h): sc-62641, MRP7 shRNA Plasmid (h): sc-62641-SH and MRP7 shRNA (h) Lentiviral Particles: sc-62641-V.

Molecular Weight of MRP7: 166 kDa.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MRP7 (D-19): sc-54542. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Chen, J.J., et al. 2012. PDE5 inhibitors, sildenafil and vardenafil, reverse multidrug resistance by inhibiting the efflux function of multidrug resistance protein 7 (ATP-binding Cassette C10) transporter. Cancer Sci. 103: 1531-1537.
2. Sun, Y.L., et al. 2013. Reversal of MRP7 (ABCC10)-mediated multidrug resistance by tariquidar. PloS ONE 8: e55576.

STORAGE

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