SANTA CRUZ BIOTECHNOLOGY, INC.

ABCB9 (E-2): sc-393431

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionarily conserved family of widely-expressed proteins that use ATP hydrolysis to catalyze the transport of various molecules across extracellular and intracellular membranes. As the largest family of transmembrane proteins, ABC genes comprise several subfamilies (ABC1, ABCA, ABCE, ABCF, MDR/TAP, MRP, ALD, OABP, GCN20 and White (also known as ABCG)). In bacteria, ABC transporters are used to import compunds that cannot be obtained by diffusion. Eukaryotic ABC transporters are largely responsible for trafficking hydrophobic compounds either within the cell as part of a metabolic process or outside the cell for transport to other organs, or for secretion from the body. ABCB9 (also designated Transporter associated with antigen processing (TAP)-like or TAPL) forms a homodimer, which is localized in lysosomes. It functions as an ATP-dependent peptide transporter that shows a broad peptide specificity ranging from 6-mer up to 59-mer peptides. ABCB9 transports these peptides with low affinity but high efficiency.

REFERENCES

1. Zhang, F., et al. 2000. Characterization of ABCB9, an ATP binding cassette protein associated with lysosomes. J. Biol. Chem. 275: 23287-23294.
2. Kobayashi, A., et al. 2000. A half-type ABC transporter TAPL is highly conserved between rodent and man, and the human gene is not responsive to interferon-γ in contrast to TAP1 and TAP2. J. Biochem. 128: 711-718.
3. Kobayashi, A., et al. 2003. Gene organization of human transporter associated with antigen processing-like (TAPL, ABCB9): analysis of alternative splicing variants and promoter activity. Biochem. Biophys. Res. Commun. 309: 815-822.
4. Yamaguchi, Y., et al. 2004. The carboxyl terminal sequence of rat transporter associated with antigen processing (TAP)-like (ABCB9) is heterogeneous due to splicing of its mRNA. Biol. Pharm. Bull. 27: 100-104.
5. Kobayashi, A., et al. 2004. Membrane localization of transporter associated with antigen processing (TAP)-like (ABCB9) visualized *in vivo* with a fluorescence protein-fusion technique. Biol. Pharm. Bull. 27: 1916-1922.
6. Wolters, J.C., et al. 2005. Selective and ATP-dependent translocation of peptides by the homodimeric ATP binding cassette transporter TAP-like (ABCB9). J. Biol. Chem. 280: 23631-23636.
7. Zhao, C., et al. 2006. TAP and TAP-like—brothers in arms? Naunyn Schmiedebergs Arch. Pharmacol. 372: 444-450.

CHROMOSOMAL LOCATION

Genetic locus: ABCB9 (human) mapping to 12q24.31; Abcb9 (mouse) mapping to 5 F.

SOURCE

ABCB9 (E-2) is a mouse monoclonal antibody raised against amino acids 409-708 mapping near the C-terminus of ABCB9 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ABCB9 (E-2) is recommended for detection of ABCB9 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ABCB9 siRNA (h): sc-60115, ABCB9 siRNA (m): sc-60116, ABCB9 shRNA Plasmid (h): sc-60115-SH, ABCB9 shRNA Plasmid (m): sc-60116-SH, ABCB9 shRNA (h) Lentiviral Particles: sc-60115-V and ABCB9 shRNA (m) Lentiviral Particles: sc-60116-V.

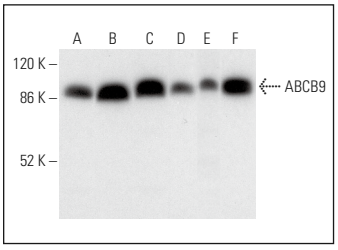
Molecular Weight of ABCB9: 84 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, CSMLO whole cell lysate: sc-364369 or M1 whole cell lysate: sc-364782.

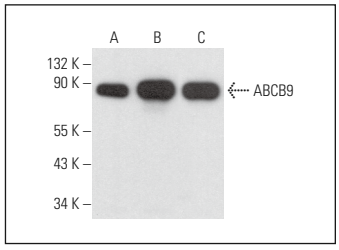
RECOMMENDED SUPPORT REAGENTS

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



ABCB9 (E-2): sc-393431. Western blot analysis of ABCB9 expression in JC (**A**), CSMLO (**B**), NIH/3T3 (**C**), RAW 264.7 (**D**), WR19L (**E**) and M1 (**F**) whole cell lysates.



ABCB9 (E-2): sc-393431. Western blot analysis of ABCB9 expression in RAW 264.7 (**A**), BYDP (**B**) and BT-20 (**C**) whole cell lysates.

STORAGE

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