

# ABCB9 (C-15): sc-46745

## 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 compounds 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. Kobayashi, A., Kasano, M., Maeda, T., Hori, S., Motojima, K., Suzuki, M., Fujiwara, T., Takahashi, E., Yabe, T., Tanaka, K., Kasahara, M., Yamaguchi, Y. and Maeda, M. 2000. A half-type ABC transporter TAPL is highly conserved between rodent and man, and the human gene is not responsive to interferon- $\gamma$  in contrast to TAP1 and TAP2. *J. Biochem.* 128: 711-718.
2. Zhang, F., Zhang, W., Liu, L., Fisher, C.L., Hui, D., Childs, S., Dorovini-Zis, K. and Ling, V. 2000. Characterization of ABCB9, an ATP binding cassette protein associated with lysosomes. *J. Biol. Chem.* 275: 23287-23294.
3. Kobayashi, A., Hori, S., Suita, N. and Maeda, M. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ABCB9 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ABCB9 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46745 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ABCB9 (C-15) is recommended for detection of ABCB9 isoforms 1, 2 and 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ABCB9 (C-15) is also recommended for detection of ABCB9 isoforms 1, 2, and 4 in additional species, including equine, canine, bovine and porcine.

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.

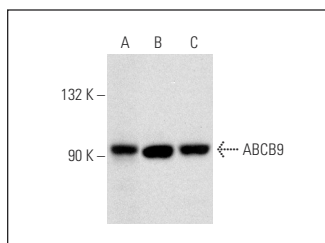
Molecular Weight of ABCB9: 84 kDa.

Positive controls: mouse thymus extract: sc-2406, NIH/3T3 whole cell lysate: sc-2210 and HeLa whole cell lysate: sc-2200.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



ABCB9 (C-15): sc-46745. Western blot analysis of ABCB9 expression in mouse thymus tissue extract (A) and HeLa (B) and NIH/3T3 (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.