ABCB8 (K-15): sc-68246



The Power to Questio

BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionarily conserved family of proteins that catalyze the transport of molecules across extracellular and intracellular membranes by harnessing the energy of ATP hydrolysis. ABCB8 (ATP-binding cassette, subfamily B (MDR/TAP), member 8), also known as MABC1, is a 735 amino acid multi-pass membrane protein that localizes to mitochondria and belongs to the superfamily of ABC transporters. Expressed ubiquitously, ABCB8 contains one ABC transporter domain and one ABC transmembrane type-1 domain through which it plays a role in protein transport and, existing as a monomer, may also be involved in drug resistance and antigen presentation. Specifically, ABCB8 is thought to facilitate the compartmentalization and transport of peptides, as well as heme, from mitochondria to the cytosol. Two isoforms of ABCB8, designated short and long, exist due to alternative splicing events.

REFERENCES

- Allikmets, R., Gerrard, B., Hutchinson, A. and Dean, M. 1996. Characterization of the human ABC superfamily: isolation and mapping of 21 new genes using the expressed sequence tags database. Hum. Mol. Genet. 5: 1649-1655.
- Hogue, D.L., Liu, L. and Ling, V. 1999. Identification and characterization of a mammalian mitochondrial ATP-binding cassette membrane protein. J. Mol. Biol. 285: 379-389.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605464. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Saito, S., Iida, A., Sekine, A., Miura, Y., Ogawa, C., Kawauchi, S., Higuchi, S. and Nakamura, Y. 2002. Three hundred twenty-six genetic variations in genes encoding nine members of ATP-binding cassette, subfamily B (ABCB/MDR/TAP), in the Japanese population. J. Hum. Genet. 47: 38-50.
- 5. Yasui, K., Mihara, S., Zhao, C., Okamoto, H., Saito-Ohara, F., Tomida, A., Funato, T., Yokomizo, A., Naito, S., Imoto, I., Tsuruo, T. and Inazawa, J. 2004. Alteration in copy numbers of genes as a mechanism for acquired drug resistance. Cancer Res. 64: 1403-1410.
- Melaine, N., Satie, A.P., Lassurguère, J., Desmots, S., Jegou, B. and Samson, M. 2006. Molecular cloning of several rat ABC transporters including a new ABC transporter, Abcb8, and their expression in rat testis. Int. J. Androl. 29: 392-399.
- Tang, L., Bergevoet, S.M., Franssen, L.E., de Witte, T., Jansen, J.H., Raymakers, R.A. and van der Reijden, B.A. 2009. Exclusion of ABCB8 and ABCB10 as cancer candidate genes in acute myeloid leukemia. Leukemia 23: 1000-1002.
- Elliott, A.M. and Al-Hajj, M.A. 2009. ABCB8 mediates doxorubicin resistance in melanoma cells by protecting the mitochondrial genome. Mol. Cancer Res. 7: 79-87.

CHROMOSOMAL LOCATION

Genetic locus: ABCB8 (human) mapping to 7q36.1; Abcb8 (mouse) mapping to 5 A3.

SOURCE

ABCB8 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ABCB8 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-68246 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABCB8 (K-15) is recommended for detection of ABCB8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

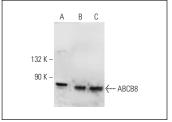
ABCB8 (K-15) is also recommended for detection of ABCB8 in additional species, including equine.

Suitable for use as control antibody for ABCB8 siRNA (h): sc-72414, ABCB8 siRNA (m): sc-72415, ABCB8 shRNA Plasmid (h): sc-72414-SH, ABCB8 shRNA Plasmid (m): sc-72415-SH, ABCB8 shRNA (h) Lentiviral Particles: sc-72414-V and ABCB8 shRNA (m) Lentiviral Particles: sc-72415-V.

Molecular Weight of ABCB8: 72 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

DATA



ABCB8 (K-15): sc-68246. Western blot analysis of ABCB8 expression in 293T (**A**), HeLa (**B**) and Hep G2 (**C**)

STORAGE

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

RESEARCH USE

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

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