

ABCB7 (H-300): sc-20968

BACKGROUND

The peroxisomal membrane contains several ATP-binding cassette (ABC) transporters, ABCD1–4 that are known to be present in the human peroxisome membrane. All four proteins are ABC half-transporters, which dimerize to form an active transporter. A mutation in the ABCD1 causes X-linked adrenoleukodystrophy (X-ALD), a peroxisomal disorder which affects lipid storage. ABCD2 in mouse, is expressed at high levels in the brain and adrenal organs, which are adversely affected in X-ALD. The peroxisomal membrane comprises 2 quantitatively major proteins, 22k Da PMP22 and 70 kDa ABCD3. ABCD3 is associated with irregularly shaped vesicles which may be defective peroxisomes or peroxisome precursors. ABCD4 is a 73 kDa protein that localizes to peroxisomes. The genes which encode ABCD1–4 map to human chromosome Xq28, 12q11-q12, 1p22-p21 and 14q24.3, respectively. ABCB7 is a half-transporter involved in the transport of heme from the mitochondria to the cytosol and maps to human chromosome Xq13.1-q13.3.

REFERENCES

1. Gartner, J., et al. 1992. Characterization and localization of the human 70 kD peroxisomal membrane protein (PMP70) gene. (Abstract) Am. J. Hum. Genet. 51: 168.
2. Lombard-Platet, G., et al. 1996. A close relative of the adrenoleukodystrophy (ALD) gene codes for a peroxisomal protein with a specific expression pattern. Proc. Natl. Acad. Sci. USA 93: 1265-1269.
3. Shani, N., et al. 1997. Identification of a fourth half ABC transporter in the human peroxisomal membrane. Hum. Mol. Genet. 6: 1925-1931.
4. Moser, H.W. 1997. Adrenoleukodystrophy: phenotype, genetics, pathogenesis and therapy. Brain 120: 1485-1508.
5. Savary, S., et al. 1997. Chromosomal localization of the adrenoleukodystrophy-related gene in man and mice. Eur. J. Hum. Genet. 5: 99-101.
6. Holzinger, A., et al. 1998. Genomic organization and chromosomal localization of the human peroxisomal membrane protein-1-like protein (PXMP1-L) gene encoding a peroxisomal ABC transporter. FEBS Letts. 426: 238-242.

CHROMOSOMAL LOCATION

Genetic locus: ABCB7 (human) mapping to Xq13.3; Abcb7 (mouse) mapping to X D.

SOURCE

ABCB7 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of ABCB7 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.

STORAGE

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

APPLICATIONS

ABCB7 (H-300) is recommended for detection of ABCB7 of mouse, rat and 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)], 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).

ABCB7 (H-300) is also recommended for detection of ABCB7 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ABCB7 siRNA (h): sc-90986, Abcb7 siRNA (m): sc-140758, ABCB7 shRNA Plasmid (h): sc-90986-SH, Abcb7 shRNA Plasmid (m): sc-140758-SH, ABCB7 shRNA (h) Lentiviral Particles: sc-90986-V and Abcb7 shRNA (m) Lentiviral Particles: sc-140758-V.

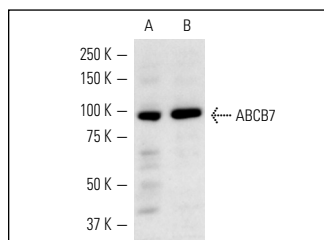
Molecular Weight of ABCB7: 95 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ABCB7 (H-300): sc-20968. Western blot analysis of ABCB7 expression in CCRF-CEM (A) and HL-60 (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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