



ABCA8 (T-13): sc-107365

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. ABCA8 (ATP-binding cassette, sub-family A (ABC1), member 8) is a 1,581 amino acid multi-pass membrane protein that contains two ABC transporter domains and belongs to the ABC transporter family. Expressed in a variety of tissues with particularly high expression in liver, heart and skeletal muscle, ABCA8 functions as an ATP-dependent lipophilic drug transporter that exists as multiple alternatively spliced isoforms. The gene encoding ABCA8 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. 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.
2. Kaminski, W.E., Wenzel, J.J., Piehler, A., Langmann, T. and Schmitz, G. 2001. ABCA6, a novel subclass ABC transporter. *Biochem. Biophys. Res. Commun.* 285: 1295-1301.
3. Tsuruoka, S., Ishibashi, K., Yamamoto, H., Wakaumi, M., Suzuki, M., Schwartz, G.J., Imai, M. and Fujimura, A. 2002. Functional analysis of ABCA8, a new drug transporter. *Biochem. Biophys. Res. Commun.* 298: 41-45.
4. Iida, A., Saito, S., Sekine, A., Mishima, C., Kitamura, Y., Kondo, K., Harigae, S., Osawa, S. and Nakamura, Y. 2002. Catalog of 605 single-nucleotide polymorphisms (SNPs) among 13 genes encoding human ATP-binding cassette transporters: ABCA4, ABCA7, ABCA8, ABCD1, ABCD3, ABCD4, ABCE1, ABCF1, ABCG1, ABCG2, ABCG4, ABCG5, and ABCG8. *J. Hum. Genet.* 47: 285-310.
5. Wakaumi, M., Ishibashi, K., Ando, H., Kasanuki, H. and Tsuruoka, S. 2005. Acute digoxin loading reduces ABCA8 mRNA expression in the mouse liver. *Clin. Exp. Pharmacol. Physiol.* 32: 1034-1041.
6. Kim, W.S., Guillemin, G.J., Glaros, E.N., Lim, C.K. and Garner, B. 2006. Quantitation of ATP-binding cassette subfamily-A transporter gene expression in primary human brain cells. *Neuroreport* 17: 891-896.
7. Ohtsuki, S., Kamoi, M., Watanabe, Y., Suzuki, H., Hori, S. and Terasaki, T. 2007. Correlation of induction of ATP binding cassette transporter A5 (ABCA5) and ABCB1 mRNAs with differentiation state of human colon tumor. *Biol. Pharm. Bull.* 30: 1144-1146.
8. Kim, W.S., Weickert, C.S. and Garner, B. 2008. Role of ATP-binding cassette transporters in brain lipid transport and neurological disease. *J. Neurochem.* 104: 1145-1166.
9. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612505. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Abca8b (mouse) mapping to 11 E1.

SOURCE

ABCA8 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ABCA8 of mouse 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-107365 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABCA8 (T-13) is recommended for detection of ABCA8 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ABCA8 siRNA (m): sc-140753, ABCA8 shRNA Plasmid (m): sc-140753-SH and ABCA8 shRNA (m) Lentiviral Particles: sc-140753-V.

Molecular Weight of ABCA8: 179 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.

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.

PROTOCOLS

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