

ABCG1 (H-65): sc-20795



The Power to Question

BACKGROUND

ABCG1 (also designated ABC8 or human white gene), a member of the evolutionary conserved family of ATP-binding cassette (ABC) transporters, exhibits high homology with the *Drosophila* white gene. ABC transporters couple the energy of ATP hydrolysis to the translocation of various molecules across biological membranes. These proteins contain characteristic ATP-binding domains and transmembrane domains which form a channel-like structure for transport. ABCG1 functions to regulate cholesterol and phospholipid transport in macrophages. ABCG1 is highly expressed in several tissues, including brain, spleen, lung and placenta, and has been localized to the cell surface and intracellular compartments of cholesterol-laden macrophages.

REFERENCES

- Hyde, S.C., et al. 1990. Structural model of ATP-binding proteins associated with cystic fibrosis, multi-drug resistance and bacterial transport. *Nature* 346: 362-365.
- Dean, M. and Allikmets, R. 1995. Evolution of ATP-binding cassette transporter genes. *Curr. Opin. Genet. Dev.* 5: 779-785.
- Chen, H., et al. 1996. Cloning of the cDNA for a human homolog of the *Drosophila* white gene and mapping to chromosome 21q22.3. *Am. J. Hum. Genet.* 59: 66-75.
- Savary, S., et al. 1996. Molecular cloning of a mammalian ABC transporter homologous to *Drosophila* white gene. *Mamm. Genome* 7: 673-676.
- Croop, J.M., et al. 1997. Isolation and characterization of a mammalian homolog of the *Drosophila* white gene. *Gene* 185: 77-85.
- Schwiebert, E.M. 1999. ABC transporter-facilitated ATP conductive transport. *Am. J. Physiol.* 276: C1-C8.
- Glucken, J., et al. 2000. ABCG1 (ABC8), the human homolog of the *Drosophila* white gene, is a regulator of macrophage cholesterol and phospholipid transport. *Proc. Natl. Acad. Sci. USA* 97: 817-822.

CHROMOSOMAL LOCATION

Genetic locus: ABCG1 (human) mapping to 21q22.3; Abcg1 (mouse) mapping to 17 A3.3.

SOURCE

ABCG1 (H-65) is a rabbit polyclonal antibody raised against amino acids 336-400 of ABCG1 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.

RESEARCH USE

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

APPLICATIONS

ABCG1 (H-65) is recommended for detection of ABCG1 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).

Suitable for use as control antibody for ABCG1 siRNA (h): sc-41138, ABCG1 siRNA (m): sc-41139, ABCG1 shRNA Plasmid (h): sc-41138-SH, ABCG1 shRNA Plasmid (m): sc-41139-SH, ABCG1 shRNA (h) Lentiviral Particles: sc-41138-V and ABCG1 shRNA (m) Lentiviral Particles: sc-41139-V.

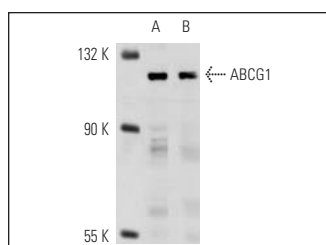
Molecular Weight of ABCG1: 110 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

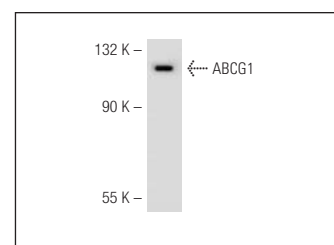
RECOMMENDED SECONDARY REAGENTS

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



ABCG1 (H-65): sc-20795. Western blot analysis of ABCG1 expression in Hep G2 (A) and Jurkat (B) whole cell lysates.



ABCG1 (H-65): sc-20795. Western blot analysis of ABCG1 expression in 293T whole cell lysate.

SELECT PRODUCT CITATIONS

- Wang, N., et al. 2006. LXR-induced redistribution of ABCG1 to plasma membrane in macrophages enhances cholesterol mass efflux to HDL. *Arterioscler. Thromb. Vasc. Biol.* 26: 1310-1316.

PROTOCOLS

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