

ABCG8 (H-300): sc-30111

BACKGROUND

The ABCG (white) subfamily of ABC transporters, which includes ABCG1, ABCG5 and ABCG8, are critically involved in the regulation of lipid-trafficking mechanisms in macrophages, hepatocytes, and intestinal mucosa cells. ABCG8 (also designated Sterolin-2) is expressed in the liver, small intestine, and colon. ABCG8 normally cooperates with ABCG5 to limit intestinal absorption and to promote biliary excretion of sterols, whereas mutated forms of ABCG8 and ABCG5 cause sterol accumulation and atherosclerosis. ABCG8 and ABCG5 genes are also distinct targets of the LXR α and LXR β oxysterol receptors, which serve as sterol sensors to coordinately regulate sterol catabolism, storage, efflux and elimination. Mutations in either ABCG8 or ABCG5 lead to Sitos-terolemia, a rare autosomal recessive disorder characterized by hyperabsorption of all sterols, including cholesterol and plant and shellfish sterols. Patients with this disease are hypercholesterolemic and frequently develop xanthomas, accelerated atherosclerosis, and premature coronary artery disease.

REFERENCES

1. Berge, K.E., et al. 2000. Accumulation of dietary cholesterol in sitosterolemia caused by mutations in adjacent ABC transporters. *Science* 290: 1771-1775.
2. Lu, K., et al. 2001. Two genes that map to the stsl locus cause sitosterolemia: genomic structure and spectrum of mutations involving sterolin-1 and sterolin-2, encoded by *abcg5* and *abcg8*, respectively. *Am. J. Hum. Genet.* 69: 278-290.
3. Lee, M.H., et al. 2001. Genetic basis of sitosterolemia. *Curr. Opin. Lipidol.* 12: 141-149.
4. Lee, M.H., et al. 2001. Identification of a gene, ABCG5, important in the regulation of dietary cholesterol absorption. *Nat. Genet.* 27: 79-83.
5. Schmitz, G., et al. 2001. Role of ABCG1 and other ABCG family members in lipid metabolism. *J. Lipid Res.* 42: 1513-1520.

CHROMOSOMAL LOCATION

Genetic locus: ABCG8 (human) mapping to 2p21; *Abcg8* (mouse) mapping to 17 E4.

SOURCE

ABCG8 (H-300) is a rabbit polyclonal antibody raised against amino acids 374-673 mapping at the C-terminus of ABCG8 of human origin.

PRODUCT

Each vial contains 200 μ g 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

ABCG8 (H-300) is recommended for detection of ABCG8 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).

Suitable for use as control antibody for ABCG8 siRNA (h): sc-41154, ABCG8 siRNA (m): sc-140763, ABCG8 shRNA Plasmid (h): sc-41154-SH, ABCG8 shRNA Plasmid (m): sc-140763-SH, ABCG8 shRNA (h) Lentiviral Particles: sc-41154-V and ABCG8 shRNA (m) Lentiviral Particles: sc-140763-V.

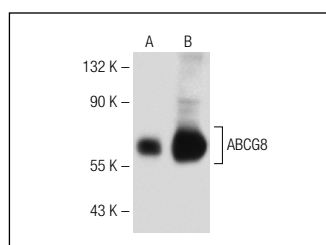
Molecular Weight of ABCG8: 75 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

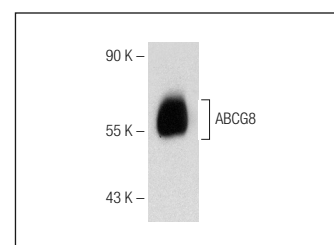
RECOMMENDED SECONDARY REAGENTS

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



ABCG8 (H-300): sc-30111. Western blot analysis of ABCG8 expression in c4 whole cell lysate (A) and mouse liver tissue extract (B).



ABCG8 (H-300): sc-30111. Western blot analysis of ABCG8 expression in human fetal liver tissue extract.

SELECT PRODUCT CITATIONS

1. Racine, R., et al. 2010. Cholesterol 7 α -hydroxylase (CYP7A1) activity is modified after chronic ingestion of depleted uranium in the rat. *J. Steroid Biochem. Mol. Biol.* 120: 60-66.
2. Zhao, Y., et al. 2011. Hypocholesterolemia, foam cell accumulation, but no atherosclerosis in mice lacking ABC-transporter A1 and scavenger receptor BI. *Atherosclerosis* 218: 314-322.