

ABCG8 (V-19): sc-21843

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

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3. Lee, M.H., et al. 2001. Identification of a gene, ABCG5, important in the regulation of dietary cholesterol absorption. *Nat. Genet.* 27: 79-83.
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5. Schmitz, G., et al. 2001. Role of ABCG1 and other ABCG family members in lipid metabolism. *J. Lipid Res.* 42: 1513-1520.
6. Repa, J.J., et al. 2002. Regulation of ATP-binding cassette sterol transporters ABCG5 and ABCG8 by the liver X receptors α and β . *J. Biol. Chem.* 277: 18793-18800.
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CHROMOSOMAL LOCATION

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

SOURCE

ABCG8 (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of ABCG8 of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21843 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABCG8 (V-19) 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), 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).

ABCG8 (V-19) is also recommended for detection of ABCG8 in additional species, including porcine.

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: Rat liver extract: sc-2395.

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.

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.