SANTA CRUZ BIOTECHNOLOGY, INC.

Squalene synthetase (C-10): sc-271143

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Several proteins mediate the biosynthesis of cholesterol. The first specific step in the cholesterol biosynthetic pathway is the conversion of transfarnesyl-diphosphate to squalene, which is catalyzed by the endoplasmic reticulum membrane-associated enzyme Squalene synthetase, also designated Squalene synthase and Farnesyl-diphosphate farnesyltransferase. Squalene synthetase is located at a branch point in the mevalonate pathway and is also involved in isoprenoid biosynthesis. Squalene epoxidase, also designated squalene monooxygenase, is a multi-pass microsomal membrane-associated enzyme that catalyzes the first oxygenation step in sterol biosynthesis and most likely functions as one of the rate-limiting enzymes in this pathway. Squalene epoxidase may form a complex with Squalene synthetase.

REFERENCES

1. Seo, J.W., et al. 2005. Overexpression of Squalene synthase in *Eleutherococcus senticosus* increases phytosterol and triterpene accumulation. Phytochemistry 66: 869-877.
2. Orenes Lorente, S., et al. 2005. Biphenylquinuclidines as inhibitors of Squalene synthase and growth of parasitic protozoa. Bioorg. Med. Chem. 13: 3519-3529.
3. Scharnagl, H., et al. 2005. New lipid-lowering agents acting on LDL receptors. Curr. Top. Med. Chem. 5: 233-242.
4. Rodrigues, J.C., et al. 2005. Antiproliferative and ultrastructural effects of BPQ-OH, a specific inhibitor of Squalene synthase, on *Leishmania amazonensis*. Exp. Parasitol. 111: 230-238.
5. Ku, B., et al. 2005. Preparation, characterization, and optimization of an *in vitro* C30 carotenoid pathway. Appl. Environ. Microbiol. 71: 6578-6583.
6. Ono, T. 2005. Studies of the FABP family: a retrospective. Mol. Cell. Biochem. 277: 1-6.
7. Xu, F., et al. 2005. Dual roles for cholesterol in mammalian cells. Proc. Natl. Acad. Sci. USA 102: 14551-14556.

CHROMOSOMAL LOCATION

Genetic locus: FDFT1 (human) mapping to 8p23.1.

SOURCE

Squalene synthetase (C-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Squalene synthetase of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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

Squalene synthetase (C-10) is recommended for detection of Squalene synthetase of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 Squalene synthetase siRNA (h): sc-61610, Squalene synthetase shRNA Plasmid (h): sc-61610-SH and Squalene synthetase shRNA (h) Lentiviral Particles: sc-61610-V.

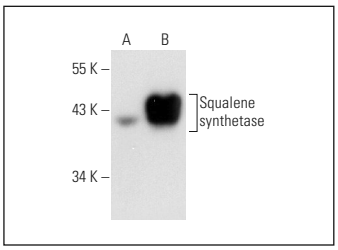
Molecular Weight of Squalene synthetase: 52 kDa.

Positive Controls: Squalene synthetase (h): 293T Lysate: sc-113914.

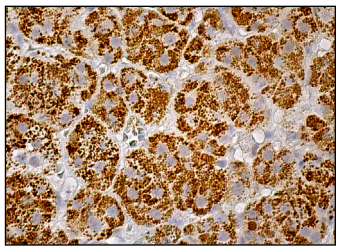
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Squalene synthetase (C-10): sc-271143. Western blot analysis of Squalene synthetase expression in non-transfected: sc-117752 (**A**) and human Squalene synthetase transfected: sc-113914 (**B**) 293T whole cell lysates.



Squalene synthetase (C-10): sc-271143. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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

PROTOCOLS

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