SANTA CRUZ BIOTECHNOLOGY, INC.

Squalene epoxidase (S-17): sc-49754

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

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2. Pasrija, R., Krishnamurthy, S., Prasad, T., Ernst, J.F. and Prasad, R. 2005. Squalene epoxidase encoded by ERG1 affects morphogenesis and drug susceptibilities of *Candida albicans*. J. Antimicrob. Chemother. 55: 905-913.
3. Nishimura, T., Inoue, T., Shibata, N., Sekine, A., Takabe, W., Noguchi, N. and Arai, H. 2005. Inhibition of cholesterol biosynthesis by 25-hydroxycholesterol is independent of OSBP. Genes Cells 10: 793-801.
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5. Ono, T. 2005. Studies of the FABP family: a retrospective. Mol. Cell. Biochem. 277: 1-6.
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7. Ruckenstuhl, C., Eidenberger, A., Lang, S. and Turnowsky, F. 2005. Single amino acid exchanges in FAD-binding domains of squalene epoxidase of *Saccharomyces cerevisiae* lead to either loss of functionality or terbinafine sensitivity. Biochem. Soc. Trans. 33: 1197-1201.

CHROMOSOMAL LOCATION

Genetic locus: SQLE (human) mapping to 8q24.13; Sqle (mouse) mapping to 15 D1.

SOURCE

Squalene epoxidase (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Squalene epoxidase of human origin.

RESEARCH USE

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

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-49754 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Squalene epoxidase (S-17) is recommended for detection of Squalene epoxidase 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).

Squalene epoxidase (S-17) is also recommended for detection of Squalene epoxidase in additional species, including porcine.

Suitable for use as control antibody for Squalene epoxidase siRNA (h): sc-61608, Squalene epoxidase siRNA (m): sc-61609, Squalene epoxidase shRNA Plasmid (h): sc-61608-SH, Squalene epoxidase shRNA Plasmid (m): sc-61609-SH, Squalene epoxidase shRNA (h) Lentiviral Particles: sc-61608-V and Squalene epoxidase shRNA (m) Lentiviral Particles: sc-61609-V.

Molecular Weight of Squalene epoxidase: 55 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.

SELECT PRODUCT CITATIONS

1. Blanc, M., et al. 2011. Host defense against viral infection involves interferon mediated down-regulation of sterol biosynthesis. PLoS Biol. 9: e1000598.

STORAGE

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

MONOS Satisfaction Guaranteed

Try **Squalene epoxidase (H-6): sc-271651**, our highly recommended monoclonal alternative to Squalene epoxidase (S-17).