SANTA CRUZ BIOTECHNOLOGY, INC.

SEC14L2 (H-4): sc-271905

BACKGROUND

The monomeric, SEC14L2 (SEC14-like protein 2), also known as supernatant protein factor (SPF), α-tocopherol-associated protein or squalene transfer protein, functions as a carrier protein transferring tocopherols, as a transcriptional activator via its interaction with α-tocopherol and as a stimulator of conversion of microsomal squalene-2,3-oxide into lanosterol in cholesterol biosynthesis. High levels of SEC14L2 are expressed in liver, brain, intestine and prostate. Subcellular localization of SEC14L2 is cytoplasmic, but in the presence of α-tocopherol, SEC14L2 localizes in the nucleus. Activity of SEC14L2 depends on posttranslational modifications, specifically phosphorylation by PKA and PKC.

REFERENCES

1. Caras, I.W. and Bloch, K. 1979. Effects of a supernatant protein activator on microsomal squalene-2,3-oxide-lanosterol cyclase. J. Biol. Chem. 254: 11816-11821.
2. Friedlander, E.J., et al. 1980. Supernatant protein factor facilitates intermembrane transfer of squalene. J. Biol. Chem. 255: 8042-8045.
3. Chin, J. and Bloch, K. 1984. Role of supernatant protein factor and anionic phospholipid in squalene uptake and conversion by microsomes. J. Biol. Chem. 259: 11735-11738.
4. Shibata, N., et al. 2001. Supernatant protein factor, which stimulates the conversion of squalene to lanosterol, is a cytosolic squalene transfer protein and enhances cholesterol biosynthesis. Proc. Natl. Acad. Sci. USA 98: 2244-2249.
5. Singh, D.K., et al. 2003. Phosphorylation of supernatant protein factor enhances its ability to stimulate microsomal squalene monooxygenase. J. Biol. Chem. 278: 5646-5651.
6. Stocker, A. and Baumann, U. 2003. Supernatant protein factor in complex with RRR-α-tocopherylquinone: a link between oxidized Vitamin E and cholesterol biosynthesis. J. Mol. Biol. 332: 759-765.
7. Mokashi, V., et al. 2005. Supernatant protein factor stimulates HMG-CoA reductase in cell culture and *in vitro*. Arch. Biochem. Biophys. 433: 474-480.
8. Shibata, N., et al. 2006. Regulation of hepatic cholesterol synthesis by a novel protein (SPF) that accelerates cholesterol biosynthesis. FASEB J. 20: 2642-2644.

CHROMOSOMAL LOCATION

Genetic locus: SEC14L2 (human) mapping to 22q12.2; Sec14l2 (mouse) mapping to 11 A1.

SOURCE

SEC14L2 (H-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of SPF of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SEC14L2 (H-4) is recommended for detection of SEC14L2 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SEC14L2 siRNA (h): sc-44738, SEC14L2 siRNA (m): sc-44739, SEC14L2 shRNA Plasmid (h): sc-44738-SH, SEC14L2 shRNA Plasmid (m): sc-44739-SH, SEC14L2 shRNA (h) Lentiviral Particles: sc-44738-V and SEC14L2 shRNA (m) Lentiviral Particles: sc-44739-V.

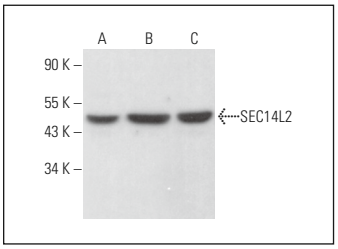
Molecular Weight of SEC14L2: 47 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, Caki-1 cell lysate: sc-2224 or Hep G2 whole cell lysate: sc-2227.

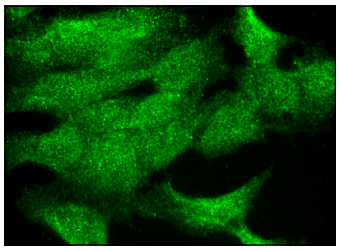
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



SEC14L2 (H-4): sc-271905. Western blot analysis of SEC14L2 expression in Hep G2 (**A**), HEK293T (**B**) and Caki-1 (**C**) whole cell lysates.



SEC14L2 (H-4): sc-271905. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and nuclear localization.

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.

PROTOCOLS

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