

# SEC14L2/L3/L4 (N-18): sc-32335

## BACKGROUND

The monomeric, SEC14L2 (SEC14-like protein 2), also known as supernatant protein factor (SPF),  $\alpha$ -tocopherol-associated protein or squalene transfer protein, functions as a carrier protein transferring tocopherols, as a transcriptional activator via its interaction with  $\alpha$ -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  $\alpha$ -tocopherol, SEC14L2 localizes in the nucleus. Activity of SEC14L2 depends on posttranslational modifications, specifically phosphorylation by PKA and PKC. SEC14L3 and SEC14L4 both contain one CRAL-TRIO domain and one GOLD domain and may be involved in the transport of hydrophobic ligands.

## REFERENCES

- 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.
- Friedlander, E.J., et al. 1980. Supernatant protein factor facilitates inter-membrane transfer of squalene. *J. Biol. Chem.* 255: 8042-8045.
- 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.
- 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: SEC14L2/SEC14L3/SEC14L4 (human) mapping to 22q12.2; Sec14l2/Sec14l3/Sec14l4 (mouse) mapping to 11 A1.

## SOURCE

SEC14L2/L3/L4 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SEC14L2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-32335 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

SEC14L2/L3/L4 (N-18) is recommended for detection of SEC14L2, SEC14L3 and SEC14L4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

SEC14L2/L3/L4 (N-18) is also recommended for detection of SEC14L2, SEC14L3 and SEC14L4 in additional species, including equine, canine, bovine and porcine.

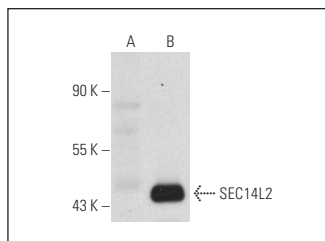
Molecular Weight of SEC14L2/L3/L4: 47 kDa.

Positive Controls: SEC14L2 (m): 293T Lysate: sc-110147, rat liver extract: sc-2395 or mouse liver extract: sc-2256.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



SEC14L2/L3/L4 (N-18): sc-32335. Western blot analysis of SEC14L2 expression in non-transfected: sc-117752 (A) and mouse SEC14L2 transfected: sc-110147 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.