

# THNSL1 (S-14): sc-165690

## BACKGROUND

Threonine is one of nine essential amino acids that cannot be synthesized by humans and must be supplied in the diet. THNSL1 (threonine synthase-like 1), also known as TSH1, is a 743 amino acid member of the serine/threonine dehydratase family. Expressed primarily in brain and endocrine glands, THNSL1 is thought to function as a pyridoxal-5'-phosphate (PLP)-dependent enzyme that uses pyridoxal phosphate as a cofactor. THNSL1 shares similarity with bacterial threonine synthases (which synthesize threonine from aspartic acid), suggesting that THNSL1 may have once participated in *de novo* threonine synthesis within the body, but has since lost its original metabolic role.

## REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611260. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Donini, S., et al. 2006. A threonine synthase homolog from a mammalian genome. *Biochem. Biophys. Res. Commun.* 350: 922-928.
3. Suzuki, E., et al. 2007. PRTFDC1, a possible tumor-suppressor gene, is frequently silenced in oral squamous-cell carcinomas by aberrant promoter hypermethylation. *Oncogene* 26: 7921-7932.
4. Xu, C.S. and Chang, C.F. 2008. Expression profiles of the genes associated with metabolism and transport of amino acids and their derivatives in rat liver regeneration. *Amino Acids* 34: 91-102.

## CHROMOSOMAL LOCATION

Genetic locus: THNSL1 (human) mapping to 10p12.1; Thns1 (mouse) mapping to 2 A3.

## SOURCE

THNSL1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of THNSL1 of human origin.

## 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-165690 P, (100 µg 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.

## 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.

## APPLICATIONS

THNSL1 (S-14) is recommended for detection of THNSL1 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); non cross-reactive with THNSL2.

THNSL1 (S-14) is also recommended for detection of THNSL1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for THNSL1 siRNA (h): sc-90396, THNSL1 siRNA (m): sc-154255, THNSL1 shRNA Plasmid (h): sc-90396-SH, THNSL1 shRNA Plasmid (m): sc-154255-SH, THNSL1 shRNA (h) Lentiviral Particles: sc-90396-V and THNSL1 shRNA (m) Lentiviral Particles: sc-154255-V.

Molecular Weight of THNSL1: 83 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or NIH/3T3 whole cell lysate: sc-2210.

## 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.