

THNSL1 (G-14): sc-165688

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 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-165688 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 or our catalog for detailed protocols and support products.

APPLICATIONS

THNSL1 (G-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 (G-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.