

THNSL2 (D-14): sc-169597

BACKGROUND

Threonine is one of nine essential amino acids that cannot be synthesized by humans and must be supplied in the diet. THNSL2 (threonine synthase-like 2), also known as TSH2, is a 484 amino acid protein belonging to the threonine synthase family. Utilizing pyridoxal phosphate as a cofactor, THNSL2 may function as a catabolic phosphohyase on γ and β phosphorylated substrates. THNSL2 may also degrade O-phospho-threonine to α -ketobutyrate, ammonia and phosphate. Existing as four alternatively spliced isoforms, THNSL2 is encoded by a gene mapping to human chromosome 2p11.2. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8 gene defects. An extremely rare recessive genetic disorder, Alström syndrome, is related to mutations in the ALMS1 gene.

REFERENCES

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3. Donini, S., et al. 2006. A threonine synthase homolog from a mammalian genome. *Biochem. Biophys. Res. Commun.* 350: 922-928.
4. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. *Hum. Mutat.* 28: 1114-1123.
5. Rifas, L. and Weitzmann, M.N. 2009. A novel T cell cytokine, secreted osteoclastogenic factor of activated T cells, induces osteoclast formation in a RANKL-independent manner. *Arthritis Rheum.* 60: 3324-3335.
6. Rooryck, C., et al. 2010. Array-CGH analysis of a cohort of 86 patients with oculoauriculovertebral spectrum. *Am. J. Med. Genet. A* 152A: 1984-1989.
7. You, Y.H., et al. 2010. Time-series gene expression profiles in AGS cells stimulated with *Helicobacter pylori*. *World J. Gastroenterol.* 16: 1385-1396.

CHROMOSOMAL LOCATION

Genetic locus: THNSL2 (human) mapping to 2p11.2; Thnsl2 (mouse) mapping to 6 C1.

SOURCE

THNSL2 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of THNSL2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-169597 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

THNSL2 (D-14) is recommended for detection of THNSL2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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); non cross-reactive with THNSL1.

THNSL2 (D-14) is also recommended for detection of THNSL2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for THNSL2 siRNA (h): sc-94994, THNSL2 siRNA (m): sc-154256, THNSL2 shRNA Plasmid (h): sc-94994-SH, THNSL2 shRNA Plasmid (m): sc-154256-SH, THNSL2 shRNA (h) Lentiviral Particles: sc-94994-V and THNSL2 shRNA (m) Lentiviral Particles: sc-154256-V.

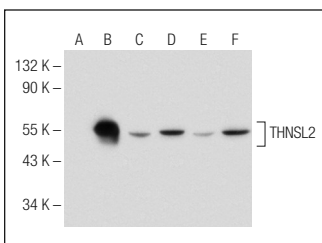
Molecular Weight of THNSL2 isoforms 1/2/3/4: 54/45/43/47 kDa.

Positive Controls: THNSL2 (m): 293T Lysate: sc-124038, Jurkat whole cell lysate: sc-2204 or SW480 cell lysate: sc-2219.

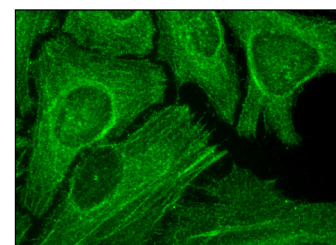
RECOMMENDED SECONDARY REAGENTS

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



THNSL2 (D-14): sc-169597. Western blot analysis of THNSL2 expression in non-transfected 293T: sc-117752 (A), mouse THNSL2 transfected 293T: sc-124038 (B), Jurkat (C), SW480 (D), T-47D (E) and Hep G2 (F) whole cell lysates.



THNSL2 (D-14): sc-169597. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic 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.