

# THSD4 (I-12): sc-163450

## BACKGROUND

THSD4 (thrombospondin type-1 domain-containing protein 4) is a 1,018 amino acid secreted protein that promotes matrix assembly. Existing as three alternatively spliced isoforms, THSD4 contains six TSP type-1 domains and one PLAC domain. The gene that encodes THSD4 contains about 686,432 bases and maps to human chromosome 15q23. Housing approximately 106 million base pairs and encoding more than 700 genes, chromosome 15 makes up about 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

## REFERENCES

- Hurowitz, G.I., et al. 1993. Neuropsychiatric aspects of adult-onset Tay-Sachs disease: two case reports with several new findings. *J. Neuropsychiatry Clin. Neurosci.* 5: 30-36.
- Mori, S., et al. 2008. Association of genetic variations of genes encoding thrombospondin, type 1, domain-containing 4 and 7A with low bone mineral density in Japanese women with osteoporosis. *J. Hum. Genet.* 53: 694-697.
- Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. *JAAPA* 21: 21-25.
- Dan, B. 2009. Angelman syndrome: current understanding and research prospects. *Epilepsia* 50: 2331-2339.
- Ferrer-Bolufer, I., et al. 2009. Tyrosinemia type 1 and Angelman syndrome due to paternal uniparental isodisomy 15. *J. Inherit. Metab. Dis.* 32: S349-S353.
- Wawrzik, M., et al. 2010. The C15orf2 gene in the Prader-Willi syndrome region is subject to genomic imprinting and positive selection. *Neurogenetics* 11: 153-161.
- Naoi, Y., et al. 2011. Prediction of pathologic complete response to sequential paclitaxel and 5-fluorouracil/epirubicin/cyclophosphamide therapy using a 70-gene classifier for breast cancers. *Cancer* 117: 3682-3690.

## CHROMOSOMAL LOCATION

Genetic locus: THSD4 (human) mapping to 15q23; Thsd4 (mouse) mapping to 9 B.

## SOURCE

THSD4 (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of THSD4 of human origin.

## RESEARCH USE

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

## 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-163450 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

THSD4 (I-12) is recommended for detection of THSD4 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 other THSD family members.

THSD4 (I-12) is also recommended for detection of THSD4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for THSD4 siRNA (h): sc-90258, THSD4 siRNA (m): sc-154258, THSD4 shRNA Plasmid (h): sc-90258-SH, THSD4 shRNA Plasmid (m): sc-154258-SH, THSD4 shRNA (h) Lentiviral Particles: sc-90258-V and THSD4 shRNA (m) Lentiviral Particles: sc-154258-V.

Molecular Weight of THSD4 isoforms: 112/57/24 kDa.

## 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.

## STORAGE

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

## PROTOCOLS

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