

THAP3 (N-17): sc-137836

BACKGROUND

THAP3 (THAP domain-containing protein 3) is a 239 amino acid protein that contains one THAP-type zinc finger and exists as 3 alternatively spliced isoforms. The gene that encodes THAP3 contains roughly 10,721 bases and maps to human chromosome 1p36.31. Spanning about 260 million base pairs and comprising nearly 8% of the human genome, chromosome 1 is the largest human chromosome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

1. Eudy, J.D., et al. 1998. Isolation of a gene encoding a novel member of the nuclear receptor superfamily from the critical region of Usher syndrome type II α at 1q41. *Genomics* 50: 382-384.
2. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
3. Roussigne, M., et al. 2003. The THAP domain: a novel protein motif with similarity to the DNA-binding domain of P element transposase. *Trends Biochem. Sci.* 28: 66-69.
4. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
5. Bessièrè, D., et al. 2008. Structure-function analysis of the THAP zinc finger of THAP1, a large C2CH DNA-binding module linked to Rb/E2F pathways. *J. Biol. Chem.* 283: 4352-4363.
6. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. *Neurobiol. Dis.* 31: 309-315.
7. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. *Graefes Arch. Clin. Exp. Ophthalmol.* 247: 715-718.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612532. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Mazars, R., et al. 2010. The THAP-zinc finger protein THAP1 associates with coactivator HCF-1 and O-GlcNAc transferase: a link between DYT6 and DYT3 dystonias. *J. Biol. Chem.* 285: 13364-13371.

CHROMOSOMAL LOCATION

Genetic locus: THAP3 (human) mapping to 1p36.31; Thap3 (mouse) mapping to 4 E2.

SOURCE

THAP3 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of THAP3 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-137836 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

THAP3 (N-17) is recommended for detection of THAP3 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 THAP family members.

THAP3 (N-17) is also recommended for detection of THAP3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for THAP3 siRNA (h): sc-78846, THAP3 siRNA (m): sc-154247, THAP3 shRNA Plasmid (h): sc-78846-SH, THAP3 shRNA Plasmid (m): sc-154247-SH, THAP3 shRNA (h) Lentiviral Particles: sc-78846-V and THAP3 shRNA (m) Lentiviral Particles: sc-154247-V.

Molecular Weight of THAP3 isoforms: 27/27/20 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker[™] compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (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.

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.