

ADAMTS-16 (T-18): sc-67440

BACKGROUND

ADAMTS (a disintegrin and metalloproteinase domain with Thrombospondin type-1 modules) is a family of zinc-dependent proteases that are implicated in a variety of normal and pathological conditions, including arthritis and cancer. ADAMTS protein family members contain an amino-terminal pro-peptide domain, a metalloproteinase domain, a disintegrin-like domain and a carboxy-terminus that contains a varying number of Thrombospondin type-1 (TSP-1) motifs. Structurally, ADAMTS-16 most closely resembles ADAMTS-18. ADAMTS-16 is expressed predominantly in fetal lung and kidney tissues, as well as in adult brain tissue. ADAMTS-16 may play a role in cartilage aggrecan loss in osteoarthritis (OA), a disease of the joints. This role is suggested by a significant upregulation of ADAMTS-16 in OA synovium and cartilage.

REFERENCES

1. Tang, B.L. and Hong, W. 1999. ADAMTS: a novel family of proteases with an ADAM protease domain and Thrombospondin 1 repeats. *FEBS Lett.* 445: 223-225.
2. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605008. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Tang, B.L. 2001. ADAMTS: a novel family of extracellular matrix proteases. *Int. J. Biochem. Cell Biol.* 33: 33-44.
4. Cal, S., Obaya, A.J., Llamazares, M., Garabaya, C., Quesada, V. and Lopez-Otin, C. 2002. Cloning, expression analysis and structural characterization of seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and Thrombospondin 1 domains. *Gene* 283: 49-62.
5. Ote, M., Mita, K., Kawasaki, H., Kobayashi, M. and Shimada, T. 2005. Characteristics of two genes encoding proteins with an ADAM-type metalloprotease domain, which are induced during the molting periods in *Bombyx mori*. *Arch. Insect Biochem. Physiol.* 59: 91-98.
6. Zeng, W., Corcoran, C., Collins-Racie, L.A., Lavallie, E.R., Morris, E.A. and Flannery, C.R. 2006. Glycosaminoglycan-binding properties and aggrecanase activities of truncated ADAMTSs: comparative analyses with ADAMTS-5, -9, -16 and -18. *Biochim. Biophys. Acta* 1760: 517-524.
7. Davidson, R.K., Waters, J.G., Kevorkian, L., Darrah, C., Cooper, A., Donell, S.T. and Clark, I.M. 2006. Expression profiling of metalloproteinases and their inhibitors in synovium and cartilage. *Arthritis Res. Ther.* 8: R124.
8. LocusLink Report (LocusID: 11173). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: ADAMTS16 (human) mapping to 5p15.32; Adamts16 (mouse) mapping to 13 C1.

SOURCE

ADAMTS-16 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ADAMTS-16 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-67440 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ADAMTS-16 (T-18) is recommended for detection of ADAMTS-16 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).

ADAMTS-16 (T-18) is also recommended for detection of ADAMTS-16 in additional species, including equine and canine.

Suitable for use as control antibody for ADAMTS-16 siRNA (h): sc-61952, ADAMTS-16 siRNA (m): sc-61953, ADAMTS-16 shRNA Plasmid (h): sc-61952-SH, ADAMTS-16 shRNA Plasmid (m): sc-61953-SH, ADAMTS-16 shRNA (h) Lentiviral Particles: sc-61952-V and ADAMTS-16 shRNA (m) Lentiviral Particles: sc-61953-V.

Molecular Weight of ADAMTS-16: 136 kDa.

Positive Controls: Mouse brain extract: sc-2253.

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.

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.