SANTA CRUZ BIOTECHNOLOGY, INC.

ADAMTS-16 (H-75): sc-50490

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 propeptide 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., et al. 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., et al. 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. Nicholson,A.C., Malik,S.B. and Van Meir,E.G. 2005. Functional evolution of ADAMTS genes: evidence from analyses of phylogeny and gene organization. BMC Evol. Biol. 5: 11-11.
6. Ote, M., et al. 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.
7. Zeng, W., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

ADAMTS-16 (H-75) is a rabbit polyclonal antibody raised against amino acids 986-1060 mapping near the C-terminus 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.

STORAGE

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

APPLICATIONS

ADAMTS-16 (H-75) 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), immunoprecipitation [1-2 µg per 100-500 µg 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).

ADAMTS-16 (H-75) is also recommended for detection of ADAMTS-16 in additional species, including equine, canine, bovine and porcine.

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.

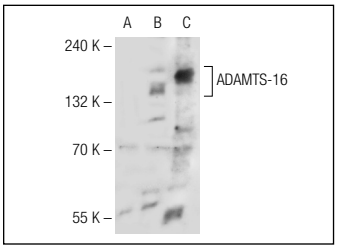
Molecular Weight of ADAMTS-16: 136 kDa.

Positive Controls: ADAMTS-16 (h): 293T Lysate: sc-127940 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ADAMTS-16 (H-75): sc-50490. Western blot analysis of ADAMTS-16 expression in non-transfected: sc-117752 (**A**) and human ADAMTS-16 transfected: sc-127940 (**B**) 293T whole cell lysates and mouse brain tissue extract (**C**).

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.