



ADAMTS-18 (H-155): sc-68416

BACKGROUND

ADAMTS (a disintegrin and metalloproteinase domain, with Thrombospondin 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 1 (TSP 1) motifs. ADAMTS genes are primarily expressed in fetal tissues, including the lung, kidney and liver. ADAMTS-18 is a secreted protein that is also expressed in adult brain, endothelium, prostate and submaxillary gland. ADAMTS-18 has two known splice variants and it is structurally most similar to ADAMTS-16. ADAMTS-18 is downregulated in carcinoma cell lines by methylation of its promoter. Forced expression of ADAMTS-18 in carcinoma cells can lead to significant inhibition of cell growth, suggesting that it plays a significant role as a tumor suppressor.

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 Letts.* 445: 223-225.
2. Tang, B.L. 2001. ADAMTS: a novel family of extracellular matrix proteases. *Int. J. Biochem. Cell Biol.* 33: 33-44.
3. Cal, S., Obaya, A.J., Llamazares, M., Garabaya, C., Quesada, V. and López-Otín, 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.
4. 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.
5. Sjöblom, T., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., Willson, J.K., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
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. Jones, G.C. 2006. ADAMTS proteinases: potential therapeutic targets? *Curr. Pharm. Biotechnol.* 7: 25-31.
8. 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.
9. Jin, H., Wang, X., Ying, J., Wong, A.H., Li, H., Lee, K.Y., Srivastava, G., Chan, A.T., Yeo, W., Ma, B.B., Putti, T.C., Lung, M.L., Shen, Z.Y., Xu, L.Y., Langford, C. and Tao, Q. 2007. Epigenetic identification of ADAMTS18 as a novel 16q23.1 tumor suppressor frequently silenced in esophageal, nasopharyngeal and multiple other carcinomas. *Oncogene* 26: 7490-7498.

CHROMOSOMAL LOCATION

Genetic locus: ADAMTS18 (human) mapping to 16q23; Adamts18 (mouse) mapping to 8 E1.

SOURCE

ADAMTS-18 (H-155) is a rabbit polyclonal antibody raised against amino acids 986-1140 mapping near the C-terminus of ADAMTS-18 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.

APPLICATIONS

ADAMTS-18 (H-155) is recommended for detection of ADAMTS-18 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).

Suitable for use as control antibody for ADAMTS-18 siRNA (h): sc-61954 and ADAMTS-18 siRNA (m): sc-61955.

Molecular Weight of ADAMTS-18: 135 kDa.

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.

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.