

# ADAMTS-15 (H-135): sc-68425

## 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. ADAMTS genes are primarily expressed in fetal tissues, including the lung, kidney and liver. ADAMTS-15 is a weak aggrecanase expressed in the fetal kidney and liver. It cleaves the interglobular domain of aggrecan, separating the G<sub>1</sub> and G<sub>2</sub> domains. In human breast carcinoma, low expression levels of ADAMTS-15 together with high expression levels of ADAMTS-8 is associated with a greater risk for recurrence and death.

## REFERENCES

1. Tang, B.L. 2001. ADAMTS: a novel family of extracellular matrix proteases. *Int. J. Biochem. Cell Biol.* 33: 33-44.
2. 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.
3. Somerville, R.P., et al. 2003. Characterization of ADAMTS-9 and ADAMTS-20 as a distinct ADAMTS subfamily related to *Caenorhabditis elegans* GON-1. *J. Biol. Chem.* 278: 9503-9513.
4. Llamazares, M., et al. 2003. Identification and characterization of ADAMTS-20 defines a novel subfamily of metalloproteinases-disintegrins with multiple Thrombospondin 1 repeats and a unique GON domain. *J. Biol. Chem.* 278: 13382-13389.
5. Demircan, K., et al. 2005. ADAMTS-9 is synergistically induced by interleukin-1 $\beta$  and tumor necrosis factor  $\alpha$  in OUMS-27 chondrosarcoma cells and in human chondrocytes. *Arthritis Rheum.* 52: 1451-1460.
6. Porter, S., et al. 2005. ADAMTS-8 and ADAMTS-15 expression predicts survival in human breast carcinoma. *Int. J. Cancer* 118: 1241-1247.
7. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
8. Milner, J.M., et al. 2007. Metalloproteinase and inhibitor expression profiling of resorbing cartilage reveals pro-collagenase activation as a critical step for collagenolysis. *Arthritis Res. Ther.* 8: R142
9. East, C.J., et al. 2007. ADAMTS-5 deficiency does not block aggrecanolysis at preferred cleavage sites in the chondroitin sulfate-rich region of aggrecan. *J. Biol. Chem.* 282: 8632-8640.

## CHROMOSOMAL LOCATION

Genetic locus: ADAMTS15 (human) mapping to 11q24.3; Adamts15 (mouse) mapping to 9 A4.

## SOURCE

ADAMTS-15 (H-135) is a rabbit polyclonal antibody raised against amino acids 781-915 mapping near the C-terminus of ADAMTS-15 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

ADAMTS-15 (H-135) is recommended for detection of ADAMTS-15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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-15 (H-135) is also recommended for detection of ADAMTS-15 in additional species, including equine and porcine.

Suitable for use as control antibody for ADAMTS-15 siRNA (h): sc-72443, ADAMTS-15 siRNA (m): sc-72444, ADAMTS-15 shRNA Plasmid (h): sc-72443-SH, ADAMTS-15 shRNA Plasmid (m): sc-72444-SH, ADAMTS-15 shRNA (h) Lentiviral Particles: sc-72443-V and ADAMTS-15 shRNA (m) Lentiviral Particles: sc-72444-V.

Molecular Weight of ADAMTS-15: 103 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.

## SELECT PRODUCT CITATIONS

1. Viloria, C.G., et al. 2009. Genetic inactivation of ADAMTS15 metalloprotease in human colorectal cancer. *Cancer Res.* 69: 4926-4934.

## 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.


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Try **ADAMTS-15 (5F3): sc-517041**, our highly recommended monoclonal alternative to ADAMTS-15 (H-135).