



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Anti-ADAMTS-3, Propeptide Region

Developed in Rabbit
Affinity Isolated Antibody

Product Number **A 6602**

Product Description

Anti-ADAMTS-3, Propeptide Region is developed in rabbit using a synthetic peptide corresponding to the propeptide domain of the human ADAMTS-3 as immunogen. Affinity isolated antigen specific antibody is obtained from rabbit anti-ADAMTS-3 antiserum by immuno-specific purification which removes essentially all rabbit serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-ADAMTS-3, Propeptide Region may be used for the detection and localization of human ADAMTS (A Disintegrin And Metalloproteinase with Thrombo-Spondin motif). By immunoblotting against the reduced protein, the antibody identifies the zymogen form at 130-140 kDa, activated forms at 94-105 kDa (major bands), and breakdown products at 50 kDa, 34 kDa in cell culture media and lysates.

ADAMTS-3 is a member of the larger family of ADAMs (A Disintegrin And Metalloproteinase) metalloproteinases containing thrombospondin (TS) repeats. ADAMTS-3 (A Disintegrin And Metalloproteinase with ThromboSpondin-3 motif was first described in human brain.¹ Human ADAMTS-3 is 61% identical to human ADAMTS-2.² Both ADAMTS-2 and ADAMTS-3 have the ability to process procollagen II, but it is suggested that ADAMTS-3 is the major procollagen II N-propeptidase.² ADAMTS-3 expression is found in placenta, cartilage, skin, lung, brain, and heart.

Full length human ADAMTS-3 contains 1,201 amino acids and has a predicted mass of 135.1 kDa, but glycosylation and the abundance of cysteine residues gives ADAMTS-3 a greater apparent molecular weight on reduced SDS-PAGE gels. Purified ADAMTS-3 resolves at a lower molecular weight of 108 kDa, due to

cleavage at the furin site. ADAMTS-3 contains the canonical HexxHxxxxxH zinc metalloproteinase motif, and has been shown to be proteolytically active, cleaving procollagen II. In addition to the metallo-protease domain, ADAMTS-3 has a propeptide domain, a prohormone convertase (PC, furin) cleavage site, a cysteine-rich domain, and three thrombospondin-1 like domains, followed by a C-terminal domain unique to ADAMTS-2 and ADAMTS-3. ADAMTS-3 does not have a transmembrane domain, unlike many of the ADAMs proteases, and is a secreted protein, much of which binds to the ECM (extracellular matrix).

Reagent

Anti-ADAMTS-3, Propeptide Region is supplied in phosphate buffered saline (PBS) containing 50% glycerol and 0.05% sodium azide. The protein concentration is approximately 1 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to six months. For extended storage, the solution may be stored -20 °C. Do not store below -22 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

A minimum working antibody dilution of 1:1,000 is determined by immunoblotting a tissue cell lysate using an alkaline phosphatase conjugated secondary antibody and BCIP/NBT as the substrate. A starting antibody dilution of 1:5,000 is recommended for chemiluminescent substrates

Note: Higher antibody dilutions may be necessary for non-human samples. EDTA/EGTA treatment of tissues or lysates is required to see latent zymogen.

In order to obtain the best results and assay sensitivity in various techniques and preparations we recommend determining optimum working dilutions by titration.

References

1. Birk, D.E., et al., in Cell Biology of Extracellular Matrix, 2nd Ed., Hay, E., ed., Plenum Publishing, New York, NY: 1991), pp. 221-254.
2. Fernandes, R.J., et al., Procollagen II amino propeptide processing by ADAMTS-3. J. Biol. Chem., **276**, 31502-31509 (2001).

kaa 05/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.