



ADAMTS5 (Aggrecanase 2, A Disintegrin And Metalloproteinase with Thrombospondin-3 motif)

Catalog number

A0859-61E4

Supplier

United States Biological

ADAMTS5 (a disintegrin and metalloproteinase with thrombospondin motifs 5), also known as aggrecanase-2 and ADAMTS11, is a member of the family of secreted zinc proteases with a multi-domain structure (1, 2). The protein precursors consist of signal peptide and following domains: pro, catalytic, disintegrin-like, TS type 1 motif, cysteine-rich, spacer and a variable number of TS type 1 motifs. ADAMTS5 is an active protease effectively cleaving alpha 2-macroglobulin (3), aggrecan (4), and brevican (5), and is inhibited by TIMP-3 with inhibition constants in the subnanomolar range (6). Based on the murine model studies (7, 8), this protease may be a key enzyme in the degradation of cartilage leading to osteoarthritis and recombinant human eumatoid arthritis. The purified recombinant human ADAMTS5 starts at the N-terminus of the catalytic domain and ends at the C-terminus of the TSP-1 domain. The amino acid sequence of recombinant human ADAMTS5 is 98%, 97%, and 96% identical to that of canine, bovine, and mouse/rat. The aggrecanase activity can be inhibited by 5 mM 1,10-phenanthroline and recombinant human TIMP-3.

Applications

Suitable for use in ELISA, Western Blot and Immunoprecipitation. Other applications not tested.

Recommended Dilution

Immunoprecipitation: 25ug/ml using conditioned culture medium spiked with recombinant human ADAMTS5.

Western Blot: 0.1ug/ml using recombinant human ADAMTS5 as sample

Optimal dilutions to be determined by the researcher.

Storage and Stability

Lyophilized powder may be stored at -20°C. Stable for 12 months after receipt at -20°C. Reconstitute with sterile PBS. Aliquot to avoid repeated freezing and thawing. Store at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Immunogen

Recombinant protein corresponding to aa262-622 from human ADAMTS5, expressed in NSO cells (Q9UNA0).

Formulation

Supplied as a lyophilized powder from PBS, 5% trehalose. Reconstitute with 500ul sterile PBS.

Purity

Purified by immunoaffinity chromatography.

Specificity

For in vitro research use only, not for human or veterinary diagnostic or medical use

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Recognizes human ADAMTS5. In Western Blot, crossreacts <5% with recombinant human ADAMTS1 and recombinant human ADAMTS1.2.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

E IP WB

Crossreactivity

Hu

Storage

-20°C

Reference

1. Porter, S. et al. (2005) Biochem. J. 386:15.
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