

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse ADAMTS1 in Western blots. In Western blots, less than 5% cross-reactivity with recombinant human (rh) ADAMTS4, rhADAMTSL1.2, and rhADAMTS15 is observed and less than 1% cross-reactivity with rhADAMTSL2, rhADAMTS5, rhADAMTS8, rhADAMTS10, rhADAMTS12, rhADAMTS13, and rhADAMTS16 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse ADAMTS1 Phe254-Cys725 Accession # P97857
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human ADAMTS1 (Catalog # 2197-AD) and Recombinant Mouse ADAMTS1 (catalog # Catalog # 5867-AD)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ADAMTS1 (a disintegrin and metalloproteinase with thrombospondin motifs 1), also known as METH1, is the founding member of the family of secreted zinc proteases with a multidomain structure (1-3). The protein precursor consists of a signal peptide and the following domains: pro, catalytic, disintegrinlike, TS type 1 motif, cysteine rich, spacer and a variable number of thrombospondin type 1 motifs. Based on their substrate specificity, ADAMTS1 and associated family members may be key enzymes in the degradation of cartilage leading to inflammation and arthritis (4). It is an active protease cleaving α2macroglobulin (5), aggrecan (6), and versican (7). Compared to ADAMTS4 (aggrecanase 1) and ADAMTS5 (aggrecanase 2), the aggrecanase activity of ADAMTS1 is lower. However, its activity can be enhanced by the binding of a cofactor such as fibulin1 (8). ADAMTS1 is essential for normal growth and the structure and function of the kidneys, adrenal glands and female reproductive organs (9). It also plays an important role in atherosclerosis (10). It has been shown to inhibit endothelial cell proliferation by direct binding and sequestration of VEGF165 and to inhibit fibroblast migration at high concentrations by binding to FGF 2 (11, 12). The purified rmADAMTS1 starts at the N terminus of the catalytic domain and ends in the Cys-rich domain.

References:

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