

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ADAMTS1 Propeptide in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with mature recombinant human ADAMTS1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human ADAMTS1 Leu50-Arg252 Accession # Q9UHI8
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

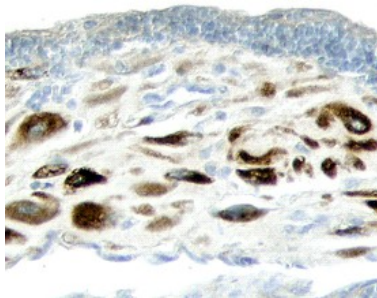
## APPLICATIONS

**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
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human ADAMTS1 (Catalog # 2197-AD)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human ADAMTS1 (Catalog # 2197-AD), see our available <a href="#">Western blot detection antibodies</a>

## DATA

### Immunohistochemistry



**ADAMTS1 in Human Placenta.**  
ADAMTS1 was detected in immersion fixed paraffin-embedded sections of human placenta using 15 µg/mL Goat Anti-Human ADAMTS1 Propeptide Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3079) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

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

**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 multi-domain structure (1-3). 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. Based on their substrate specificity, ADAMTS1 and associated family members may be key enzymes in degradation of cartilage leading to inflammation and arthritis (4). It is an active protease cleaving  $\alpha$ -2-macroglobulin (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 cofactor such as fibulin-1 (8). The aggrecanase activity can be inhibited using 5 mM 1,10 Phenanthroline. 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 VEGF<sub>165</sub> and to inhibit fibroblast migration at high concentrations by binding to FGF-2 (11, 12). The purified rhADAMTS1 starts at the N-terminus of the catalytic domain and ends in the beginning of the spacer region.

**References:**

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