

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ADAMTS5 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) ADAMTS1 or rhADAMTSL1.2 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 362810
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human ADAMTS5 Ser262-Pro622 Accession # Q9UNA0
<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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human ADAMTS5 (Catalog # 2198-AD) under non-reducing conditions only
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human ADAMTS5 (Catalog # 2198-AD), see our available Western blot detection antibodies

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 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**

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 α2-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 rheumatoid arthritis. The purified recombinant human (rh) 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 rhADAMTS5 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 rhTIMP-3 (R&D Systems, Catalog # 973-TM).

**References:**

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3. Tortorella, M.D. *et al.* (2004) *J. Biol. Chem.* **279**:17554.
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7. Glasson, S.S. *et al.* (2005) *Nature*, **434**: 644.
8. Stanton, H. *et al.* (2005) *Nature*, **434**:648.