

## DESCRIPTION

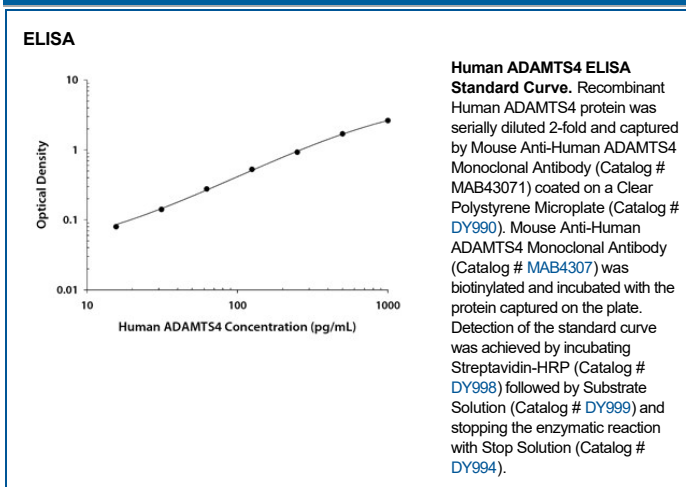
|                           |                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects human ADAMTS4 in direct ELISA.                                                                                                                                                                        |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 416608                                                                                                                                                              |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                    |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human ADAMTS4<br>Phe213-Cys685<br>Accession # O75173                                                                                                          |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*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>ELISA</b> | <p>This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human ADAMTS4 Monoclonal Antibody (Catalog # <a href="#">MAB4307</a>).</p> <p>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human ADAMTS4 DuoSet ELISA Kit (Catalog # <a href="#">DY4307-05</a>) for convenient development of a sandwich ELISA.</p> |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## DATA



## 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.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C                                                                                                                              |
| <b>Stability &amp; Storage</b> | <p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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**

ADAMTS4 (a disintegrin and metalloproteinase with thrombospondin motifs 4), also known as aggrecanase-1, is a member of the family of secreted zinc proteases with a multi-domain structure (1-3). The protein precursors consist of a signal peptide and the following domains: pro, catalytic, disintegrin-like, TS type 1 motif, cysteine-rich, and spacer. It is the only ADAMTS identified that has one TS type I motif. It is an active protease effectively cleaving  $\alpha$ -2-macroglobulin and aggrecan at multiple sites, and is inhibited by TIMP-3 with inhibition constants in subnanomolar range (4-6). It receives great attention due to the elevation in its mRNA level after treatment with Interleukin-1 (7). However, in a mouse model of osteoarthritis, ADAMTS4 knock-out mice did not exhibit any significant protective effect (8). ADAMTS4 consists of a signal peptide (aa 1 to 51), a pro domain (aa 52 to 212) and a mature chain (aa 213 to 837) containing the following domains: catalytic (aa 218 to 425), disintegrin (aa 437 to 519), TSP type-1 (aa 520 to 575), Cys-rich (aa 577 to 685) and spacer (aa 686 to 837). The amino acid sequence of rhADAMTS4 is 100%, 97% and 94% identical to that of chimpanzee, dog, and mouse/rat/bovine.

**References:**

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2. Porter, S. *et al.* (2005) *Biochem. J.* **386**:15.
3. Nagase, H. and M. Kashiwagi (2003) *Arthritis Res. Ther.* **5**:94.
4. Tortorella, M. D. *et al.* (2004) *J. Biol. Chem.* **279**:17554.
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7. Pratta, M. A. *et al.* (2003) *Arthritis Reum.* **48**:119.
8. Glasson, S. S. *et al.* (2004) *Arthritis Reum.* **50**:2547.