biotechne

Human ADAMTS4 Antibody

Monoclonal Mouse IgG₁ Clone # 416608 Catalog Number: MAB43071

RDSYSTEMS

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human ADAMTS4 in direct ELISA.
Source	Monoclonal Mouse IgG ₁ Clone # 416608
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ADAMTS4 Phe213-Cys685 Accession # O75173
Formulation	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.

ELISA

This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human ADAMTS4 Monoclonal Antibody (Catalog # MAB4307).

This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human ADAMTS4 DuoSet ELISA Kit (Catalog # DY4307-05) for convenient development of a sandwich ELISA.



Human ADAMTS4 ELISA Standard Curve. Recombinant Human ADAMTS4 protein was serially diluted 2-fold and captured by Mouse Anti-Human ADAMTS4 Monoclonal Antibody (Catalog # MAB43071) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human ADAMTS4 Monoclonal Antibody (Catalog # MAB4307) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE		
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	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	
Stability & Storage	 Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months20 to -70 °C under sterile conditions after reconstitution. 	

Rev. 12/22/2022 Page 1 of 2



Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956 USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373 Europe | Middle East | Africa TEL +44 (0)1235 529449

bio-techne[®]

Human ADAMTS4 Antibody

Monoclonal Mouse IgG₁ Clone # 416608 Catalog Number: MAB43071

BACKGROUND

RDsystems

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 α-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:

- 1. Totorella, M. D. et al. (1999) Science 284:1664.
- 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.
- 5. Struglics, A. et al. (2006) Osteoarthritis Cartilage. 14:101.
- 6. Kashiwagi, M. et al. (2001) J. Biol. Chem. 276:12501.
- Pratta, M. A. *et al.* (2003) Arthritis Reum. **48**:119.
 Glasson, S. S. *et al.* (2004) Arthritis Reum. **50**:2547.

Rev. 12/22/2022 Page 2 of 2

biotechne

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956 USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373 Europe | Middle East | Africa TEL +44 (0)1235 529449