Human ADAMTS4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF4307

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ADAMTS4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant human (rh) ADAMTS5 is observed and less than 1% cross-reactivity with rhADAMTS13, rhADAMTS-L1.2, and rhADAMTS1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human ADAMTS4 (Catalog # 4307-AD)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human ADAMTS4 (Catalog # 4307-AD), see our available Western blot detection antibodies

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. *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 months, -20 to -70 °C under sterile conditions after reconstitution.

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 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). The purified rhADAMTS4 starts at the catalytic domain and ends before the spacer domain. If desired, the aggrecanase activity can be inhibited by 5 mM 1,10-phenanthroline and recombinant human TIMP-3 (R&D Systems, Catalog # 973-TM).

References:

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7. Pratta, M. A. *et al.* (2003) Arthritis Reum. **48**:119.
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