Human ADAMTS1 Propeptide Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3079

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ADAMTS1 Leu50-Arg252 Accession # Q9UHI8
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 as a 0.2 μm filtered solution in PBS.

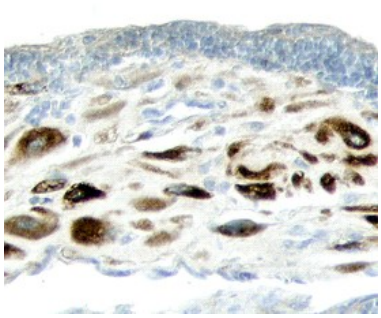
APPLICATIONS

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 ADAMTS1 (Catalog # 2197-AD)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human ADAMTS1 (Catalog # 2197-AD), see our available Western blot detection antibodies

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

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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human ADAMTS1 Propeptide Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3079

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 α-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 $VEGF_{165}$ 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:

1. Vazquez, F. *et al. (*1999) J. Biol. Chem. **274**:23349.
2. Kuno, K. *et al. (*1997) J. Biol. Chem. **272**:556.
3. Porter, S. *et al. (*2005) Biochem. J. **386**:15.
4. Nagase, H. and M. Kashiwagi (2003) Arthritis Res. Ther. **5**:94.
5. Kuno, K. *et al. (*1999) J. Biol. Chem. **274**:18821.
6. Kuno, K. *et al.* (2000) FEBS Lett. **478**:241.
7. Russel, D. L. *et al.* (2003) J. Biol. Chem. **278**:42330.
8. Lee, N., *et al.* (2005) J. Biol. Chem. **280**:34796.
9. Shindo, T., *et al.* (2000) J. Clin. Invest. **105**:1345.
10. Wight, T.N. (2005) Arterioscler Thromb. Vasc. Biol. **25**:12.
11. Luque, A. *et al. (*2003) J. Biol. Chem. **278**:23656.
12. Krampert, M. *et al. (*2005) J. Biol. Chem. **280**:23844.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956