Human/Mouse ADAMTS1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF5867

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse ADAMTS1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) ADAMTS4 and rhADAMTS15 is observed and less than 1% cross-reactivity with rhADAMTSL1.2, rhADAMTSL2, rhADAMTS5, rhADAMTS8, rhADAMTS10, rhADAMTS12, rhADAMTS13, and rhADAMTS16 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse ADAMTS1 Phe254-Cys725 Accession # P97857
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.

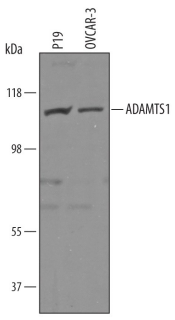
APPLICATIONS

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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse ADAMTS1 (Catalog # 5867-AD), see our available Western blot detection antibodies

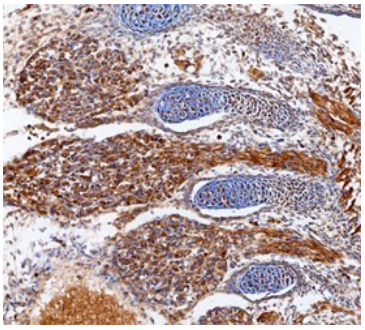
DATA

Western Blot



Detection of Human and Mouse ADAMTS1 by Western Blot. Western blot shows lysates of P19 mouse embryonal carcinoma cell line and OVCAR-3 human ovarian carcinoma cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse ADAMTS1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5867) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for ADAMTS1 at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry



ADAMTS1 in Mouse Embryo. ADAMTS1 was detected in immersion fixed frozen sections of mouse embryo (13 d.p.c.) using Sheep Anti-Human/Mouse ADAMTS1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5867) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to cartilage primordium; dorsal ganglia cell bodies and processes. View our protocol for Chromogenic IHC Staining of Frozen 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.

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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 multidomain structure (1-3). The protein precursor consists of a signal peptide and the following domains: pro, catalytic, disintegrinlike, TS type 1 motif, cysteine rich, spacer and a variable number of thrombospondin type 1 motifs. Based on their substrate specificity, ADAMTS1 and associated family members may be key enzymes in the degradation of cartilage leading to inflammation and arthritis (4). It is an active protease cleaving α2macroglobulin (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 a cofactor such as fibulin1 (8). 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 VEGF165 and to inhibit fibroblast migration at high concentrations by binding to FGF 2 (11, 12). The purified rmADAMTS1 starts at the N terminus of the catalytic domain and ends in the Cys-rich domain.

References:

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