

DESCRIPTION

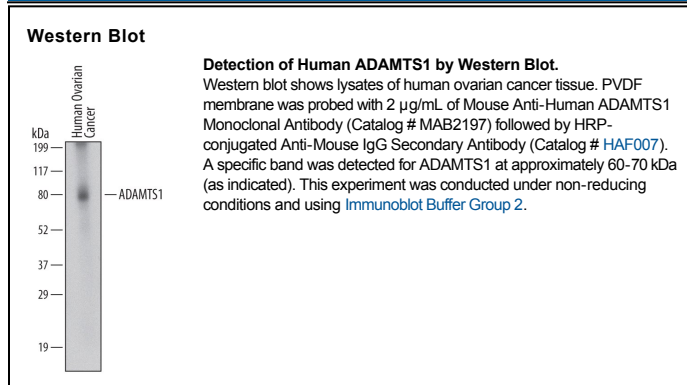
Species Reactivity	Human
Specificity	Detects human ADAMTS1 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human ADAMTS-L1.2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 268104
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ADAMTS1 Phe253-Cys724 (predicted) Accession # Q9VHI8
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	2 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



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. <ul style="list-style-type: none"> ● 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

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 VEGF165 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:

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