

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
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

PRODUCT SPECIFIC NOTICES

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