Human/Mouse ADAMTS15 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF5149

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse ADAMTS15 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human ADAMTS1, L1.2, L2, 3, 4, 5, 8, 10, 12, 13, and 16 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human ADAMTS15 Gly18-Cys682 Accession # Q8TE58
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

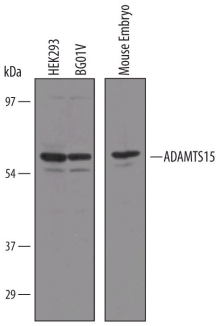
APPLICATIONS

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 Human ADAMTS15 (Catalog # 5149-AD), see our available Western blot detection antibodies

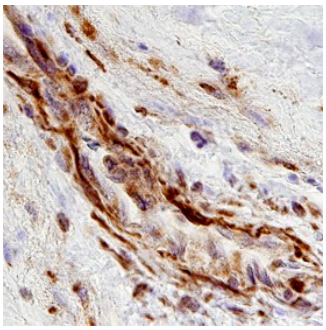
DATA

Western Blot



Detection of Human and Mouse ADAMTS15 by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line, BG01V human embryonic stem cells, and mouse embryo tissue. PVDF Membrane was probed with 1 µg/mL of Human/Mouse ADAMTS15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5149) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for ADAMTS15 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry



ADAMTS15 in Human Breast Cancer Tissue. ADAMTS15 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Human/Mouse ADAMTS15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5149) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hemotoxylin (blue). Specific staining was localized to stromal cells. 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.
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 from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

ADAMTS (a disintegrin and metalloproteinase with thrombospondin motifs) is a group of nineteen secreted zinc binding metalloproteases that is involved in development, inflammation, angiogenesis and several pathological conditions (1, 2). They are synthesized as zymogens which have a pro-domain that is removed by furin-like protein convertases. The mature secreted enzymes consist of catalytic, disintegrin-like, type I thrombospondin (TSP) motif, cysteine-rich, and spacer domains followed by zero to fourteen additional TSP motifs. Among ADAMTS proteases, ADAMTS1, -4, -5, -8, and -15 form a subfamily that possess aggrecanase activity (1 - 3). While ADAMTS4 and -5 (also known as aggrecanse-1 and -2, respectively) (4) have been well studied, the enzymatic activity of ADAMTS15 remains to be explored. It is suggested that ADAMTS15 may be involved in aggrecan degradation and breast cancer (5, 6). ADAMTS15 may also exhibit tumor suppressor activities since it contains genetic mutations in human colorectal carcinomas and restrains tumor growth and invasion in both in vitro and in vivo studies (7). The purified rhADAMTS15 is truncated and ends before the spacer domain.

References:

1. Porter, S. *et al.* (2005) Biochem. J. **386**:15.
2. Jones, G.C. and G.P. Riley (2005) Arthritis Res. Ther. **7**:160.
3. Nicholson, A.C. *et al.* (2005) BMC Evol. Biol. **5**:11.
4. Nagase, H. and M. Kashiwagi (2003) Arthritis Res. Ther. **5**:94.
5. Porter, S. *et al.* (2006) Intl. J. Cancer **118**:1241.
6. Kevorkian, L. *et al.* (2004) Arthritis Rheum. **50**:131.
7. Viloria, C.G. *et al.* (2009) Cancer Res. **69**:4926.

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