

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human HAI-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse HAI-1 is observed and less than 1% cross-reactivity with recombinant human HAI-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human HAI-1 Pro37-Glu449 Accession # NP_003701
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	0.1 µg/mL	Recombinant Human HAI-1 (Catalog # 1048-PI)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human lung and human prostate cancer tissue

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. <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

HAI-1 is a Kunitz-type serine protease inhibitor, identified as a strong inhibitor of HGF activator (HGFA) and matriptase (1). The membrane-anchored HAI-1 consists of two Kunitz domains, a LDL-receptor-like domain, and a C-terminal transmembrane domain (2). Two soluble forms are generated by ectodomain shedding, one with a single Kunitz domain and the other with two Kunitz domains. HAI-1 is not only an inhibitor but also a specific receptor of active HGFA, acting as a reservoir of this enzyme on the cell surface (3). The shedding of HAI-1 and HGFA/HAI-1 complex is enhanced by treatment with phorbol 12-myristate 13-acetate or IL-1β. The regulated shedding is completely inhibited by a synthetic zinc metalloprotease inhibitor (3).

References:

1. Denda, K. *et al.* (2002) J. Biol. Chem. **277**:14053.
2. Shimomura, T. *et al.* (1997) J. Biol. Chem. **272**:6370.
3. Kataoka, H. *et al.* (2000) J. Biol. Chem. **275**:40453.