Human TIMP-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF970

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TIMP-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse TIMP-1 and recombinant rat TIMP-1 is observed and less than 1% cross-reactivity with recombinant human (rh) TIMP-2, rhTIMP-3, and rhTIMP-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TIMP-1 Cys24-Ala207 Accession # Q6FGX5
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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.

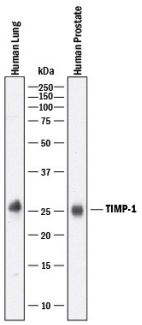
APPLICATIONS

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	1 µg/mL	See Below
Neutralization	Measured by its ability to neutralize Recombinant Human TIMP-1 (0.1 µg/mL, Catalog # 970-TM) inhibition of Recombinant Human MMP-2 (0.2 µg/mL, Catalog # 902-MP) cleavage of the fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH_2 (5 µM, Catalog # ES001). The Neutralization Dose (ND_{50}) is typically 1 µg/mL.	

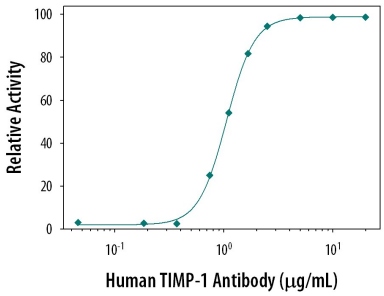
DATA

Western Blot



Detection of Human TIMP-1 by Western Blot. Western blot shows lysates of human lung tissue and human prostate tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TIMP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF970) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for TIMP-1 at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Neutralization



Neutralization of TIMP-1 Activity by Human TIMP-1 Antibody. Recombinant Human MMP-2 (0.2 µg/mL, Catalog # 902-MP) activity is measured in the presence of Recombinant Human TIMP-1 (0.1 µg/mL, Catalog # 970-TM) that has been preincubated with increasing concentrations of Goat Anti-Human TIMP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF970). The ND_{50} is typically 1 µg/mL.

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.

BACKGROUND

Tissue inhibitors of metalloproteinases or TIMPs are a family of proteins that regulate the activation and proteolytic activity of the zinc enzymes known as matrix metalloproteinases (MMPs). There are four members of the family, TIMP-1, TIMP-2, TIMP-3 and TIMP-4. TIMP-1 is a glycoprotein with a molecular mass of 28 kDa produced by a wide range of cell types. TIMP-1 inhibits active MMP-mediated proteolysis by forming an N-terminal, non-covalent binary complex with the MMP active site. TIMP-1 also associates C-terminally with Pro-MMP-9 in a complex which may play a role in regulating activation. Independent of MMPs, TIMP-1 has been shown to have a role in tissue homeostasis.

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