

DESCRIPTION

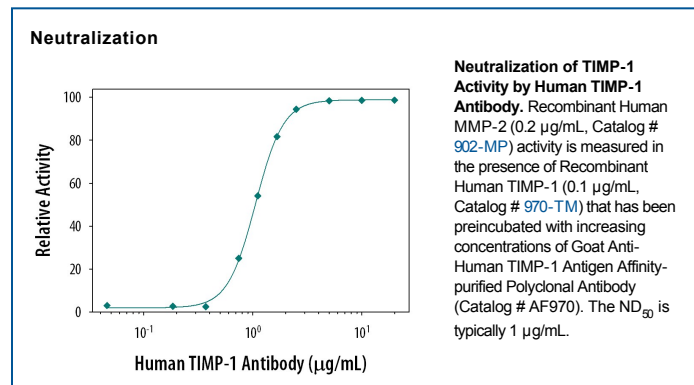
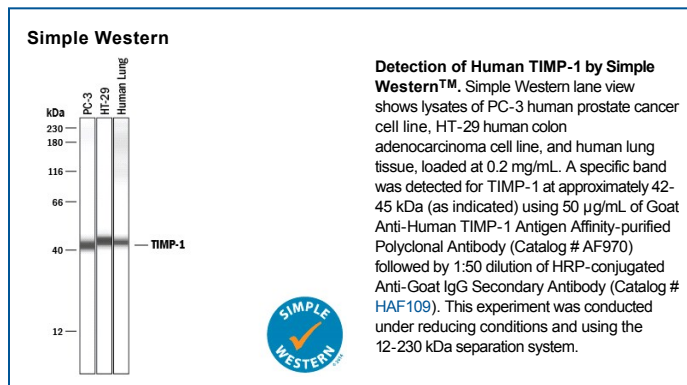
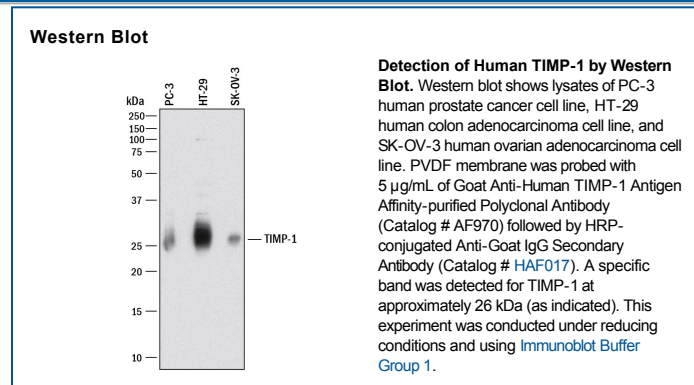
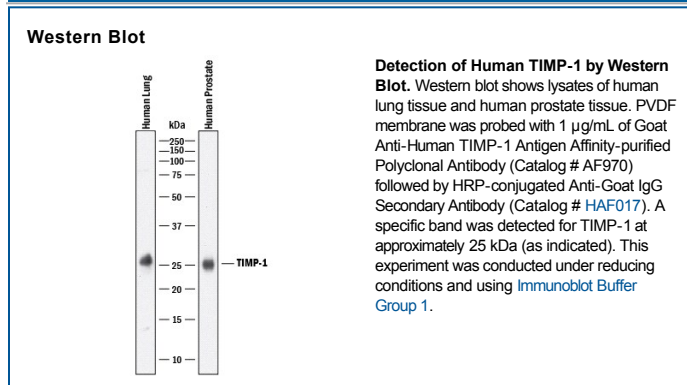
Species Reactivity	Human
Specificity	Detects human TIMP-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse TIMP-1 and recombinant rat TIMP-1 is observed and less than 1% cross-reactivity with recombinant human (rh) TIMP-2, rhTIMP-3, and rhTIMP-4 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 either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

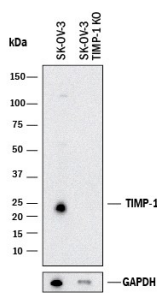
Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1-5 µg/mL	See Below
Simple Western	50 µg/mL	See Below
Knockout Validated	TIMP-1 is specifically detected in SK-OV-3 human ovarian adenocarcinoma parental cell line but is not detectable in TIMP-1 knockout SK-OV-3 cell line.	
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



Knockout Validated



Western Blot Shows Human TIMP-1 Specificity by Using Knockout Cell Line. Western blot shows lysates of SK-OV-3 human ovarian adenocarcinoma cell line and TIMP-1 knockout SK-OV-3 cell line (KO). PVDF membrane was probed with 2 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) in the parental SK-OV-3 cell line, but is not detectable in knockout SK-OV-3 cell line. GAPDH (Catalog # AF5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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. <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

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.