

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TIMP-3 in ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human TIMP-1, -2, or -4 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 183551
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TIMP-3 Cys24-Pro211 Accession # P35625
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	Recombinant Human TIMP-3 (Catalog # 973-TM)
Immunohistochemistry	8-25 µg/mL	Immersion fixed paraffin-embedded sections of human breast cancer tissue
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human TIMP-3 (Catalog # 973-TM), see our available Western blot detection antibodies
Human TIMP-3 Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human TIMP-3 Antibody (Catalog # MAB973)
ELISA Detection	0.5-2.0 µg/mL	Human TIMP-3 Biotinylated Antibody (Catalog # BAM9731)
Standard		Recombinant Human TIMP-3 (Catalog # 973-TM)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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 (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-3 is a glycoprotein with a molecular mass of 30 kDa produced by a wide range of cell types. TIMP-3 inhibits active MMP-mediated proteolysis by forming a non-covalent binary complex with the MMP active site through its N-terminal domain. In addition, TIMP-3 is the only known member of the TIMP family that is an effective inhibitor of ADAMs such as TACE (1).

TIMP-3 is unique among the TIMPs because of its high affinity for binding to the extracellular matrix (2). Point mutations in the TIMP-3 C-terminal domain have been reported to result in Sorsby's fundus dystrophy, a disease leading to macular degeneration and loss of vision.

References:

1. Amour, A. *et al.* (1998) FEBS Lett. **435**:39.
2. Leco, K.J. *et al.* (1994) J. Biol. Chem. **269**:9352.