

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TIMP-3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) TIMP-1, -2, or -4 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 277128
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 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
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human TIMP-3 (Catalog # 973-TM), see our available Western blot detection antibodies
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	MDA-MBA-231 human breast cancer cell line fixed with paraformaldehyde and permeabilized with saponin
CyTOF-reported	Brodie, T.M. <i>et al.</i> (2018) <i>Cytometry Part A</i> . 93 : 406. Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

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 also uniquely shows 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.