

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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	MDA-MBA-231 human breast cancer cell line fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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.

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