

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TIMP-1 in direct ELISAs and Western blots. Shows 100% cross-reactivity with recombinant rat TIMP-1 and 20% cross-reactivity with recombinant human TIMP-1.
Source	Monoclonal Rat IgG _{2A} Clone # 151624
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TIMP-1 Cys25-Arg205 Accession # P12032
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 Mouse TIMP-1 Western Blot Standard (Catalog # WBC022)

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 or TIMPs are a family of homologous proteins that regulate the activity of matrix metalloproteinases (MMPs) (1, 2). There are four known members of the family, TIMP-1, TIMP-2, TIMP-3, and TIMP-4 that have been found to exhibit multiple functions, including inhibition of active MMPs, pro-MMP activation, cell growth promotion, matrix binding, inhibition of angiogenesis, and the induction of apoptosis. Structurally, TIMPs have two domains, an N-terminal domain and a C-terminal domain. Each domain consists of three disulfide-bonded loops. TIMP-1 is a glycoprotein produced by a wide range of cell types. Through its N-terminal domain, TIMP-1 inhibits active MMPs by forming a non-covalent binary complex with the MMP active site. The C-terminal domain of TIMP-1 interacts with the C-terminal domain of pro-MMP-9, which may play a role in regulating pro-MMP-9 activation.

References:

1. Murphy, G. and F. Willenbrock (1995) *Methods Enzymol.* **248**:496.
2. Brew, K. *et al.* (2000) *Biochim. Biophys. Acta* **1477**:267.