

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse TIMP-4 in direct ELISAs and Western blots. In direct ELISAs, less than 2% cross-reactivity with recombinant human (rh) TIMP-1, rhTIMP-2, and rhTIMP-3 is observed. In sandwich immunoassays, this antibody is specific f
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TIMP-4 Cys30-Pro224 Accession # Q99727
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
ELISA	Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Tissue inhibitors of metalloproteinases (TIMPs) are a family of secreted proteins that regulate the activation and proteolytic activity of the zinc enzymes known as matrix metalloproteinases (MMPs). There are four known members of the family, TIMP-1, -2, -3, and -4. TIMP-4 is produced by a wide range of tissues, particularly brain, heart, ovary and skeletal muscle (1, 2). Limited studies have shown that TIMP-4 has a tumor suppressive effect against Wilm's tumor, exhibits negative correlation with glioma malignancy and is found in breast carcinoma cells (3-5). TIMP-4 inhibits MMP-mediated proteolysis by forming a non-covalent binary complex with the MMP active site through its N-terminal domain. In addition, it binds to the hemopexin-like domain of pro-MMP-2 through its C-terminal domain in a manner similar to TIMP-2 (6). However, unlike TIMP-2, TIMP-4 does not promote pro-MMP-2 activation by MT1-MMP (MMP-14) (7). Although TIMP-4 is a potent inhibitor of most MMPs, it is not an effective inhibitor of ADAMs, such as TACE (8, 9). Human TIMP-4 shares 89% sequence identity with Mouse TIMP-4.

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