

# TIMP-3 (C-20): sc-6836



The Power to Question

## BACKGROUND

TIMP-1, TIMP-2, TIMP-3 and TIMP-4 (for tissue inhibitor of metalloproteinases-1, -2, -3 and -4) complex with metalloproteinases such as collagenases, gelatinases and stromelysins, resulting in irreversible inactivation of the metalloproteinase. TIMP-1 was found to be identical to EPA (erythroid-potential activity). Parathyroid hormone has been shown to be a regulator of TIMP-2 in osteoblastic cells. TIMP-3 may be involved in regulating trophoblastic invasion of the uterus as well as in regulating remodeling of the extracellular matrix during the folding of epithelia, and in the formation, branching and expansion of epithelial tubes. TIMP-4 is most highly expressed in heart and low levels of TIMP-4 are expressed in liver, brain, lung, thymus and spleen.

## CHROMOSOMAL LOCATION

Genetic locus: TIMP3 (human) mapping to 22q12.3; Timp3 (mouse) mapping to 10 C1.

## SOURCE

TIMP-3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TIMP-3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TIMP-3 (C-20) is recommended for detection of TIMP-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TIMP-3 (C-20) is also recommended for detection of TIMP-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TIMP-3 siRNA (h): sc-37022, TIMP-3 siRNA (m): sc-37023, TIMP-3 shRNA Plasmid (h): sc-37022-SH, TIMP-3 shRNA Plasmid (m): sc-37023-SH, TIMP-3 shRNA, TIMP-3 shRNA (h) Lentiviral Particles: sc-37022-V and TIMP-3 shRNA (m) Lentiviral Particles: sc-37023-V.

Molecular Weight of TIMP-3: 30 kDa.

Positive Controls: mouse placenta extract: sc-364247, human skeletal muscle extract: sc-363776 or human heart extract: sc-363763.

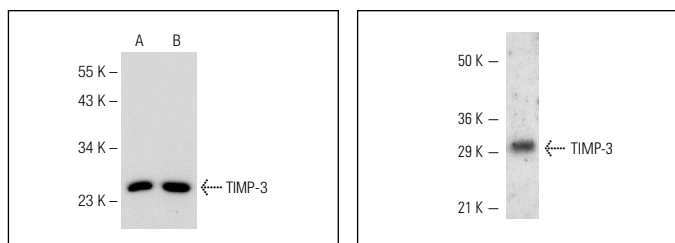
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



TIMP-3 (C-20): sc-6836. Western blot analysis of TIMP-3 expression in human skeletal muscle (A) and human heart (B) tissue extracts.

TIMP-3 (C-20): sc-6836. Western blot analysis of human recombinant TIMP-3.

## SELECT PRODUCT CITATIONS

1. Yu, W.H., et al. 2000. TIMP-3 binds to sulfated glycosaminoglycans of the extracellular matrix. *J. Biol. Chem.* 275: 31226-31232.
2. Horn, M.A., et al. 2012. Age-related divergent remodeling of the cardiac extracellular matrix in heart failure: collagen accumulation in the young and loss in the aged. *J. Mol. Cell. Cardiol.* 53: 82-90.
3. Li, J.Y., et al. 2012. Differential distribution of miR-20a and miR-20b may underly metastatic heterogeneity of breast cancers. *Asian Pac. J. Cancer Prev.* 13: 1901-1906.
4. Zhang, C., et al. 2012. High level of miR-221/222 confers increased cell invasion and poor prognosis in glioma. *J. Transl. Med.* 10: 119.
5. Li, J., et al. 2013. Genetic heterogeneity of breast cancer metastasis may be related to miR-21 regulation of TIMP-3 in translation. *Int. J. Surg. Oncol.* 2013: 875078.
6. Yao, H., et al. 2013. SIRT1 redresses the imbalance of tissue inhibitor of matrix metalloproteinase-1 and matrix metalloproteinase-9 in the development of mouse emphysema and human COPD. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 305: L615-L624.
7. Ozeki, N., et al. 2014. IL-1 $\beta$ -induced matrix metalloproteinase-13 is activated by a disintegrin and metalloprotease-28-regulated proliferation of human osteoblast-like cells. *Exp. Cell Res.* 323: 165-177.
8. Ozeki, N., et al. 2015. Polyphosphate-induced matrix metalloproteinase-3-mediated proliferation in rat dental pulp fibroblast-like cells is mediated by a Wnt5 signaling cascade. *Biosci. Trends.* 9: 160-168.

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Try **TIMP-3 (B-2): sc-373839** or **TIMP-3 (E-2): sc-373842**, our highly recommended monoclonal alternatives to TIMP-3 (C-20).