

TIMP-3 (E-2): sc-373842

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-potentiating 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.

REFERENCES

1. Docherty, A.J., et al. 1985. Sequence of human tissue inhibitor of metalloproteinases and its identity to erythroid-potentiating activity. *Nature* 318: 66-69.
2. Carmichael, D.F., et al. 1986. Primary structure and cDNA cloning of human fibroblast collagenase inhibitor. *Proc. Natl. Acad. Sci. USA* 83: 2407-2411.
3. Cook, T.F., et al. 1994. Cloning and regulation of rat tissue inhibitor of metalloproteinase-2 in osteoblastic cells. *Arch. Biochem. Biophys.* 311: 313-320.
4. Apte, S.S., et al. 1994. Gene encoding a novel murine tissue inhibitor of metalloproteinases (TIMP), TIMP-3, is expressed in developing mouse epithelia, cartilage, and muscle, and is located on mouse chromosome 10. *Dev. Dyn.* 200: 177-197.
5. Silbiger, S.M., et al. 1994. Cloning of cDNAs encoding human TIMP-3, a novel member of the tissue inhibitor of metalloproteinase family. *Gene* 141: 293-297.
6. Apte, S.S., et al. 1995. The gene structure of tissue inhibitor of metalloproteinases TIMP-3 and its inhibitory activities define the distinct TIMP gene family. *J. Biol. Chem.* 270: 14313-14318.

CHROMOSOMAL LOCATION

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

SOURCE

TIMP-3 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 181-210 at the C-terminus of TIMP-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373842 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TIMP-3 (E-2) is recommended for detection of TIMP-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (E-2) is also recommended for detection of TIMP-3 in additional species, including equine, canine, bovine and porcine.

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 (h) Lentiviral Particles: sc-37022-V and TIMP-3 shRNA (m) Lentiviral Particles: sc-37023-V.

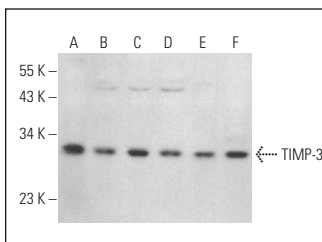
Molecular Weight of TIMP-3: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CCRF-CEM cell lysate: sc-2225 or NAMALWA cell lysate: sc-2234.

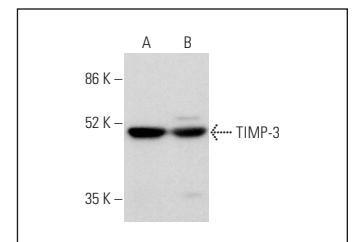
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TIMP-3 (E-2): sc-373842. Western blot analysis of TIMP-3 expression in HeLa (A), CCRF-CEM (B), NAMALWA (C), HL-60 (D), NIH/3T3 (E) and RAW 264.7 (F) whole cell lysates.



TIMP-3 (E-2): sc-373842. Western blot analysis of TIMP-3 expression in A-10 (A) and U-87 MG (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.