10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TIMP1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6709a

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	P01033
Other Accession	NP_003245
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	23171
Antigen Region	41-70

Additional Information

Gene ID	7076
Other Names	Metalloproteinase inhibitor 1, Erythroid-potentiating activity, EPA, Fibroblast collagenase inhibitor, Collagenase inhibitor, Tissue inhibitor of metalloproteinases 1, TIMP-1, TIMP1, CLGI, TIMP
Target/Specificity	This TIMP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 41-70 amino acids from the N-terminal region of human TIMP1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TIMP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TIMP1
Synonyms	CLGI, TIMP

Function	Metalloproteinase inhibitor that functions by forming one to one complexes with target metalloproteinases, such as collagenases, and irreversibly inactivates them by binding to their catalytic zinc cofactor. Acts on MMP1, MMP2, MMP3, MMP7, MMP8, MMP9, MMP10, MMP11, MMP12, MMP13 and MMP16. Does not act on MMP14. Also functions as a growth factor that regulates cell differentiation, migration and cell death and activates cellular signaling cascades via CD63 and ITGB1. Plays a role in integrin signaling. Mediates erythropoiesis in vitro; but, unlike IL3, it is species-specific, stimulating the growth and differentiation of only human and murine erythroid progenitors.
Cellular Location	Secreted
Tissue Location	Detected in rheumatoid synovial fluid (at protein level).

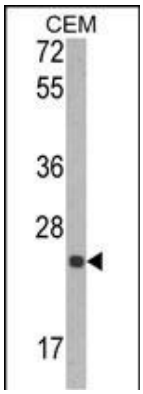
Background

TIMP1 belongs to the TIMP family. The proteins in this family are natural inhibitors of the matrix metalloproteinases (MMPs), a group of peptidases involved in degradation of the extracellular matrix. In addition to its inhibitory role against most of the known MMPs, the protein is able to promote cell proliferation in a wide range of cell types, and may also have an anti-apoptotic function.

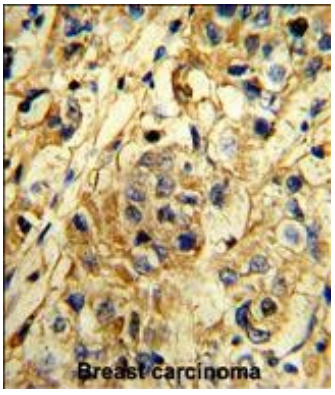
References

Safranek,J., Anticancer Res. 29 (7), 2513-2517 (2009) Onal,I.K., Eur. J. Intern. Med. 20 (4), 369-372 (2009) Okamura,H., Int. J. Oncol. 35 (1), 181-186 (2009)

Images

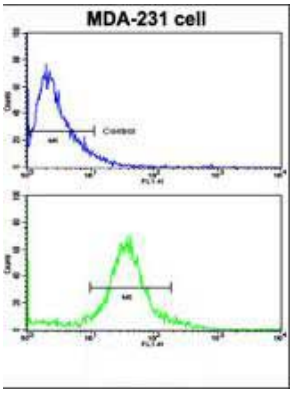


Western blot analysis of TIMP1 Antibody (N-term) (Cat. #AP6709a) in CEM cell line lysates (35ug/lane). TIMP1 (arrow) was detected using the purified Pab.

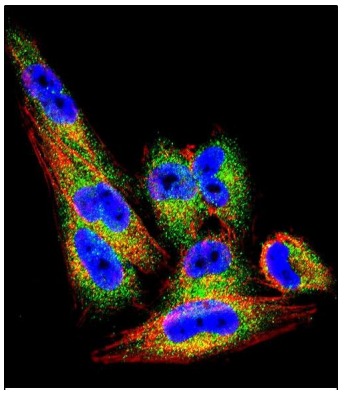


Formalin-fixed and paraffin-embedded human breast carcinoma reacted with TIMP1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Flow cytometric analysis of MDA-231 cells using TIMP1 Antibody (N-term)(bottom histogram) compared to a



negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Confocal immunofluorescent analysis of TIMP1 Antibody (N-term)(Cat#AP6709a) with A2058 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).

Citations

- A lipoxin A4 analog ameliorates blood-brain barrier dysfunction and reduces MMP-9 expression in a rat model of focal cerebral ischemia-reperfusion injury.