

TNAP (h): 293T Lysate: sc-112384

BACKGROUND

Alkaline phosphatases (AP) are glycosyl-phosphatidylinositol (GPI)-anchored, dimeric, Zn^{2+} metallated glycoproteins that catalyze the hydrolysis of phospho-monoesters into an inorganic phosphate and an alcohol. There are at least four distinct but related alkaline phosphatases: intestinal (IAP), placental (PLAP), placental-like (ALP-1 or GCAP) and tissue non-specific (TNAP). The first three are located together on chromosome 2 while the tissue non-specific form is located on chromosome 1. TNAP is widely expressed in liver, kidney, bone, stomach and colon, and is therefore referred to as the tissue non-specific form of AP. TNAP, in conjunction with plasma cell membrane glycoprotein-1, function in bone mineralization; however, mice that lack a functional form of TNAP show normal skeletal development. This enzyme has been linked directly to a disorder known as hypophosphatasia, a rare inborn disorder that is characterized by defective bone mineralization and includes skeletal defects. Human gene encoding TNAP maps to chromosome 1p36.12.

REFERENCES

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- Le Du, M.H. and Millan, J.L. 2002. Structural evidence of functional divergence in human alkaline phosphatases. *J. Biol. Chem.* 277: 49808-49814.
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CHROMOSOMAL LOCATION

Genetic locus: ALPL (human) mapping to 1p36.12.

PRODUCT

TNAP (h): 293T Lysate represents a lysate of human TNAP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

TNAP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TNAP antibodies. Recommended use: 10-20 µl per lane.

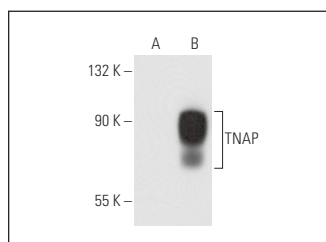
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TNAP (TRA-2-54): sc-21707 is recommended as a positive control antibody for Western Blot analysis of enhanced human TNAP expression in TNAP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

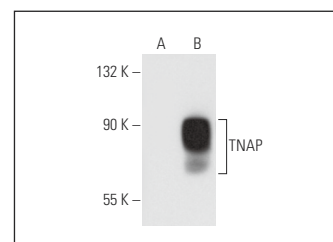
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TNAP (TRA-2-54): sc-21707. Western blot analysis of TNAP expression in non-transfected: sc-117752 (A) and human TNAP transfected: sc-112384 (B) 293T whole cell lysates.



TNAP (TRA-2-39): sc-21708. Western blot analysis of TNAP expression in non-transfected: sc-117752 (A) and human TNAP transfected: sc-112384 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.