

# TRAP (h): 293T Lysate: sc-111796

## BACKGROUND

Tartrate-resistant acid phosphatase (TRAP, ACP5) is an iron containing glycoprotein that catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. TRAP is the most basic of the acid phosphatases and is the only form not inhibited by L<sup>+</sup>-tartrate. TRAP is a relatively minor lysosomal enzyme which may be activated in certain pathologies, such as Hodgkin's disease and B- and T-cell leukemias. Receptor activator of NF $\kappa$ B ligand (RANKL) plays an essential role in osteoclast differentiation and activation by increasing the expression of protease osteoclast markers such as TRAP. TRAP has collagenolytic activity and plays a major role in ligament degradation.

## REFERENCES

1. Fleckenstein, E., et al. 1996. Cloning and characterization of the human tartrate-resistant acid phosphatase (TRAP) gene. *Leukemia* 10: 637-643.
2. Fleckenstein, E.C., et al. 2000. The human tartrate-resistant acid phosphatase (TRAP): involvement of the hemin responsive elements (HRE) in transcriptional regulation. *Leuk. Lymphoma* 36: 603-612.
3. Wittrant, Y., et al. 2003. Regulation of osteoclast protease expression by RANKL. *Biochem. Biophys. Res. Commun.* 310: 774-778.
4. Capeller, B., et al. 2003. Evaluation of tartrate-resistant acid phosphatase (TRAP) 5b as serum marker of bone metastases in human breast cancer. *Anticancer Res.* 23: 1011-1015.
5. Dwyer, K.W., et al. 2004. Blockade of the sympathetic nervous system degrades ligament in a rat MCL model. *J. Appl. Physiol.* 96: 711-718.
6. Nakano, Y., et al. 2004. Eccentric localization of osteocytes expressing enzymatic activities, protein, and mRNA signals for type 5 tartrate-resistant acid phosphatase (TRAP). *J. Histochem. Cytochem.* 52: 1475-1482.
7. SWISS-PROT/TrEMBL (P13686). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

## CHROMOSOMAL LOCATION

Genetic locus: ACP5 (human) mapping to 19p13.2.

## PRODUCT

TRAP (h): 293T Lysate represents a lysate of human TRAP transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## RESEARCH USE

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

## APPLICATIONS

TRAP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TRAP antibodies. Recommended use: 10-20  $\mu$ l per lane.

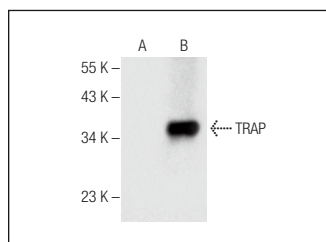
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TRAP (D-3): sc-376875 is recommended as a positive control antibody for Western Blot analysis of enhanced human TRAP expression in TRAP 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



TRAP (D-3): sc-376875. Western blot analysis of TRAP expression in non-transfected: sc-117752 (A) and human TRAP transfected: sc-111796 (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](http://www.scbt.com) for detailed protocols and support products.