TRAP (K-17): sc-30833

SANTA CRUZ
BIOTECHNOLOGY

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BACKGROUND

Tartrate-resistant acid phosphatase (TRAP, ACP5) is an iron containing gly-coprotein 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+-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 NFκB 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.

CHROMOSOMAL LOCATION

Genetic locus: ACP5 (human) mapping to 19p13.2; Acp5 (mouse) mapping to 9 A3.

SOURCE

TRAP (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TRAP 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-30833 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

TRAP (K-17) is recommended for detection of TRAP 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).

TRAP (K-17) is also recommended for detection of TRAP in additional species, including equine and porcine.

Suitable for use as control antibody for TRAP siRNA (h): sc-44164, TRAP siRNA (m): sc-155973, TRAP shRNA Plasmid (h): sc-44164-SH, TRAP shRNA Plasmid (m): sc-155973-SH, TRAP shRNA (h) Lentiviral Particles: sc-44164-V and TRAP shRNA (m) Lentiviral Particles: sc-155973-V.

Molecular Weight of TRAP: 34 kDa.

Positive Controls: TRAP (h): 293T Lysate: sc-111796.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecip-itation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA
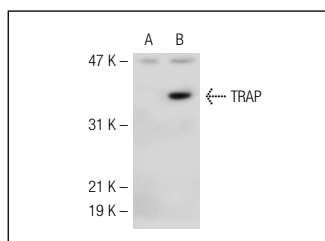
TRAP (K-17): sc-30833. Western blot analysis of TRAP expression in non-transfected: sc-117752 (**A**) and human TRAP transfected: sc-111796 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cirelli, J.A., et al. 2009. AAV2/1-TNFR:Fc gene delivery prevents peri-odontal disease progression. Gene Ther. 16: 426-436.

2. McNally, A.K. and Anderson, J.M. 2011. Foreign body-type multinucleated giant cells induced by interleukin-4 express select lymphocyte co-stimula-tory molecules and are phenotypically distinct from osteoclasts and den-dritic cells. Exp. Mol. Pathol. 91: 673-681.

3. Garcia, V.G., et al. 2011. Treatment of experimental periodontal disease with antimicrobial photodynamic therapy in nicotine-modified rats. J. Clin. Periodontol. 38: 1106-1114.

4. Nakayama, T., et al. 2011. Polarized osteoclasts put marks of tartrate-resistant acid phosphatase on dentin slices—a simple method for identi-fying polarized osteoclasts. Bone 49: 1331-1339.

PROTOCOLS

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

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Try **TRAP (D-3): sc-376875**, our highly recommended monoclonal alternative to TRAP (K-17).