**BACKGROUND**

Tartrate-resistant acid phosphatase (TRAP, ACP5) is an iron containing glyco-protein 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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

TRAP (D-3) is a mouse monoclonal antibody raised against amino acids 24-323 mapping at the C-terminus of TRAP of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

**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 (D-3) is recommended for detection of TRAP of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of TRAP: 34 kDa.

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

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.
2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2035 (0.5 ml agarose/2.0 ml).

**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.

TRAP (D-3): sc-376875. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages (B).

**PROTOCOLS**

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