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

TRAcP (Tartrate-Resistant Acid Phosphatase) (Hairy Cell Leukemia Marker) Antibody - With BSA and Az

Mouse Monoclonal Antibody [Clone ACP5/1070]
Catalog # AH12079

Product Information

Application	IHC, IF, FC
Primary Accession	P13686
Other Accession	54, 1211
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Clone Names	ACP5/1070
Calculated MW	36599

Additional Information

Gene ID	54
Other Names	Tartrate-resistant acid phosphatase type 5, TR-AP, 3.1.3.2, Tartrate-resistant acid ATPase, TrATPase, Type 5 acid phosphatase, ACP5
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	TRAcP (Tartrate-Resistant Acid Phosphatase) (Hairy Cell Leukemia Marker) Antibody - With BSA and Az is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACP5 (HGNC:124)
Function	Functions as a binuclear Fe(III)-Fe(II) acid phosphatase that hydrolyzes phosphate esters to alcohols and phosphate under acidic conditions (PubMed:1477968, PubMed:2775236). Dephosphorylates a broad range of substrates, including adenosine 5'-diphosphate (ADP), adenosine 5'-triphosphate (ATP), as well as larger phosphoproteins such as osteopontin (SPP1), a highly phosphorylated bone matrix protein, bone sialoprotein (IBSP) and synthetic compounds such as para- nitrophenyl phosphate (p-NPP) (By similarity). Through the dephosphorylation of bone matrix proteins, plays a crucial role in normal cartilage mineralization during skeletal development and in maintaining and remodeling bone integrity in adults (By similarity). Promotes osteoclast migration by dephosphorylating SPP1, which binds

	osteoclasts to the bone matrix (By similarity). Also involved in immune regulation and macrophage function, contributes to the breakdown of internalized pathogens within lysosomes (By similarity). Regulates immune cell recruitment during infection, partly via interaction with SPP1 (By similarity). The uncleaved form (isoform 5a) functions primarily in immune regulation rather than bone resorption (By similarity). May contribute to the removal of mannose-6-phosphate (Man6P) from lysosomal proteins after their delivery to lysosomes, acting in concert with ACP2 (By similarity).
Cellular Location	Lysosome {ECO:0000250|UniProtKB:Q05117}. Secreted. Note=The uncleaved form (isoform 5a) is secreted by macrophage and dendritic cell. The cleaved form (isoform 5b) is secreted by osteoclasts.

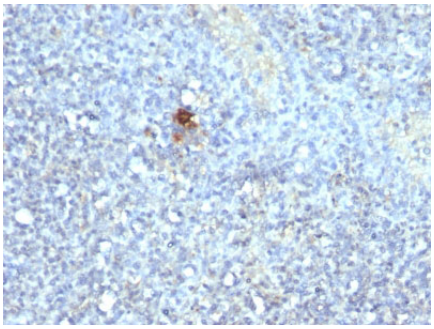
Background

It recognizes a protein of 35kDa, which is identified as tartrate-resistant acid phosphatase (TRAcP). It exists as two isoforms (5a and 5b). This MAb reacts with both the isoforms. Serum TRAcP 5a is secreted by macrophages and dendritic cells and increased in many patients of rheumatoid arthritis. Serum TRAcP 5b is produced from osteoclasts and elevated during bone resorption. TRAcP is an iron containing glycoprotein, which catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is the most basic of the acid phosphatases and is the only form not inhibited by L(+)-tartrate. TRAcP is synthesized as a latent proenzyme and is activated by proteolytic cleavage and reduction. Normally, TRAcP is highly expressed by osteoclasts, activated macrophages, neurons and endometrium during pregnancy. Expression of TRAcP is increased in certain pathological conditions such as Leukemic Reticuloendotheliosis (Hairy Cell Leukemia), Gaucherā€™s Disease, HIV-induced Encephalopathy, Osteoclastoma and in osteoporosis and metabolic bone diseases. Anti-TRAcP antibody labels the cells of Hairy Cell Leukemia (HCL) with a high degree of sensitivity and specificity. Other cells stained with this antibody are tissue macrophages and osteoclasts.

References

Capeller, B., Caffier, H., S tterlin, M.W. and Dietl, J. 2003. Evaluation of tartrate-resistant acid phosphatase (TRAP) 5b as serum marker of bone metastases in human breast cancer. Anticancer Res. 23: 1011-1015

Images



Formalin-fixed, paraffin-embedded human Spleen stained with TRAcP Monoclonal Antibody (ACP5/1070)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.