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Anti-TRAP ACP5 Monoclonal Antibody

Catalog # ABO14664

Product Information

Application	WB, IHC, IF, ICC, IP
Primary Accession	P13686
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-TRAP ACP5 Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.

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
Calculated MW	36599
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:50-1:200 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: AEGH-1
Immunogen	A synthesized peptide derived from human Tartrate Resistant Acid Phosphatase.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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.

Images

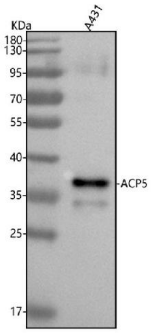


Figure 1. Western blot analysis of ACP5 using anti-ACP5 antibody (M03277-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human A431 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ACP5 antigen affinity purified monoclonal antibody (Catalog # M03277-1) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ACP5 at approximately 37 kDa. The expected band size for ACP5 is at 37 kDa.

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