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Anti-Acid phosphatase/ACP5 Antibody Picoband®

Catalog Number: A03277-1

About ACP5

Tartrate-resistant acid phosphatase (TRAP or TRAPase), also called acid phosphatase 5, tartrate resistant (ACP5), is a glycosylated monomeric metalloprotein enzyme expressed in mammals. This gene encodes 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.

Overview

Product Name	Anti-Acid phosphatase/ACP5 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Acid phosphatase/ACP5 Antibody Picoband® catalog # A03277-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P13686

Technical Details

Immunogen	E.coli-derived human Acid phosphatase/ACP5 recombinant protein (Position: N39-P325).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human ELISA, 0.1-0.5 ug/ml, -

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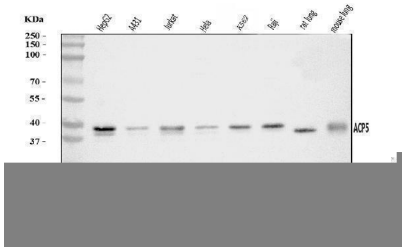
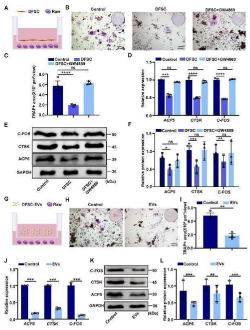
Anti-Acid phosphatase/ACP5 Antibody Picoband® (A03277-1) Images



Western blot analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). 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 HepG2 whole cell lysates, Lane 2: human A431 whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: human Hela whole cell lysates, Lane 5: human K562 whole cell lysates, Lane 6: human Raji whole cell lysates, Lane 7: rat lung tissue lysates, Lane 8: mouse lung tissue 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-Acid Phosphatase/ACP5 antigen affinity purified polyclonal antibody (Catalog # A03277-1) at 0.5 ug/mL 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 Acid Phosphatase/ACP5 at approximately 39 kDa. The expected band size for Acid Phosphatase/ACP5 is at 37 kDa.



DFSC-EVs regulated tooth eruption by inhibiting osteoclast differentiation. (A) Schematic illustration of RAW264.7 and DFSC co-culture system. (B) Representative images of TRAP staining. Scale bar = 200 um. (C) Quantitative analysis of TRAP-positive area. (D) The mRNA level of ACP5 , CTSK and CFOS in RAW264.7 cultured with DFSC. (E) The protein level of ACP5, CTSK and CFOS in RAW264.7 cultured with DFSC. (F) Western blotting quantification. (G) Schematic illustration of RAW264.7 and DFSC-EVs co-culture system. (H) Representative images of TRAP staining. Scale bar = 200 um. (I) Quantitative analysis of TRAP-positive area. (J) The mRNA level of ACP5 , CTSK and CFOS in RAW264.7 cultured with DFSC-EVs. (K) The protein level of ACP5, CTSK and CFOS in RAW264.7 cultured with DFSC-EVs. (L) Western blotting quantification. ns, not significant. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$. n = 3.Index in PubMed under a CC BY license. PMID: 39834384

ANXA1 was the core factor of DFSC-EVs regulating osteoclast differentiation. (A) Gene ontology enrichment analysis of DFSC-EVs protein profiles. (B) The top proteins of Cadherin related to regulating osteoblast differentiation based on expression level. (C) The mRNA level of ANXA1 . (D) The protein level of ANXA1. (E) Western blotting quantification. (F) Schematic illustration of RAW264.7 and siANXA1-EVs co-culture system. (G) Representative images of TRAP staining. Scale bar = 200 um. (H) Quantitative

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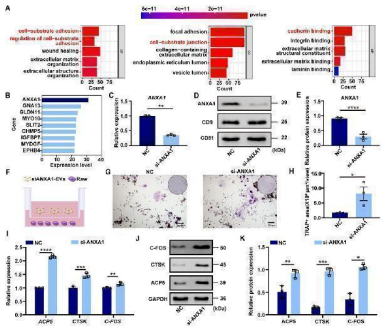
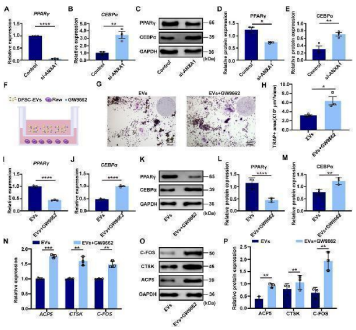
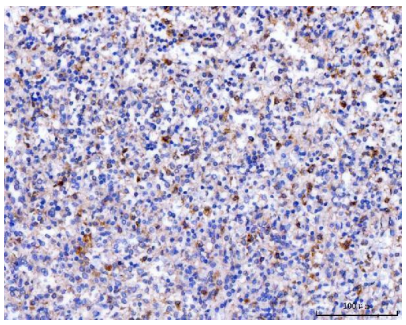


analysis of TRAP-positive area. (I) The mRNA level of ACP5 , CTSK and CFOS in RAW264.7 cultured with siANXA1-EVs. (J) The protein level of ACP5, CTSK and CFOS in RAW264.7 cultured with siANXA1-EVs. (K) Western blotting quantification. * p < 0.05, ** p < 0.01, *** p < 0.001, **** p < 0.0001. n = 3.Index in PubMed under a CC BY license. PMID: 39834384



ANXA1 mediated PPARgamma-CEBPalpha pathway to regulate osteoclast differentiation (A) The mRNA level of PPARgamma in RAW264.7 cultured with siANXA1-EVs. (B) The mRNA level of CEBPalpha in RAW264.7 cultured with siANXA1-EVs. (C) The protein level of PPARgamma and CEBPalpha in RAW264.7 cultured with siANXA1-EVs. (D) Quantitative analysis of PPARgamma protein expression. (E) Quantitative analysis of CEBPalpha protein expression. (F) Schematic illustration of PPARgamma inhibited RAW264.7 and DFSC-EVs co-culture system. (G) Representative images of TRAP staining. Scale bar = 200 um. (H) Quantitative analysis of TRAP-positive area. (I) PPARgamma inhibited RAW264.7 construction. (J) The mRNA level of CEBPalpha in PPARgamma inhibited RAW264.7. (K) The protein level of PPARgamma and CEBPalpha in PPARgamma inhibited RAW264.7. (L) Quantitative analysis of PPARgamma protein expression. (M) Quantitative analysis of CEBPalpha protein expression. (N) The mRNA level of ACP5 , CTSK and CFOS in PPARgamma inhibited RAW264.7. (O) The protein level of ACP5, CTSK and CFOS in PPARgamma inhibited RAW264.7. (P) Western blotting quantification. * p < 0.05, ** p < 0.01, *** p < 0.001, **** p < 0.0001. n = 3.Index in PubMed under a CC BY license. PMID: 39834384



IHC analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Acid Phosphatase/ACP5 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Acid Phosphatase/ACP5 was detected in a paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2

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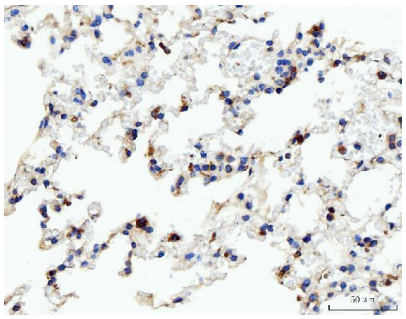
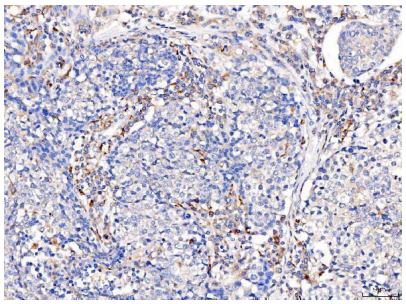
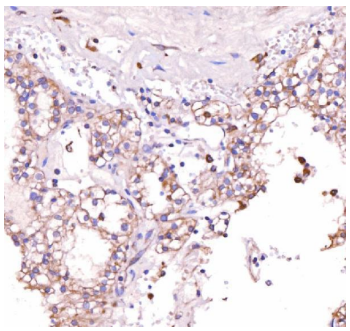


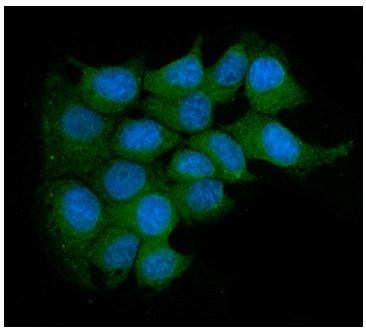
ug/ml rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Acid Phosphatase/ACP5 was detected in a paraffin-embedded section of human lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Acid Phosphatase/ACP5 was detected in a paraffin-embedded section of human renal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of Acid Phosphatase/ACP5 using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Acid Phosphatase/ACP5 was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Flow Cytometry analysis of U251 cells using anti-Acid Phosphatase/ACP5 antibody (A03277-1). Overlay histogram

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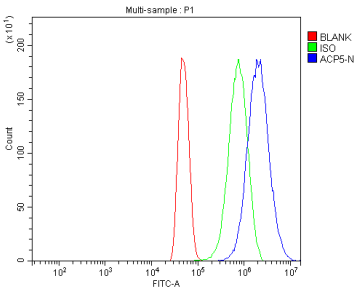

showing U251 cells stained with A03277-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Acid Phosphatase/ACP5 Antibody (A03277-1, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1 Publications Citing This Product

1. PubMed ID: 10.1111/odi.13169, JAK2□STAT3 signaling pathway is involved in rat periapical lesions induced by Enterococcus faecalis

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