

Rabbit Alkaline phosphatase/ALPL Polyclonal Antibody | anti-ALPL antibody

Anti-Alkaline phosphatase/ALPL Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19231	Rabbit	Human, Mouse, Rat	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

Alkaline phosphatase/ALPL; Polyclonal Antibody; Anti-Alkaline phosphatase/ALPL Antibody; ALPL; Alkaline phosphatase; tissue-nonspecific isozyme; AP-TNAP; TNSALP; EC 3. 1. 3. 1; Alkaline phosphatase liver/bone/kidney isozyme; alkaline phosphatase; biomineralization associated; anti-ALPL antibody

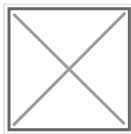
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for Alkaline phosphatase/ALPL detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.01mg NaN ₃ .
Applicable Applications for anti-ALPL antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Application Notes	WB: 0.25-0.5ug/ml Human IHC-P: 2-5ug/ml Human, Mouse, Rat ICC/IF: 5ug/ml Human FC/FACS/FCM: 1-3ug/1x10 ⁶ cells Human
Immunogen	A synthetic peptide corresponding to a sequence of human Alkaline phosphatase/ALPL (KDPKYWRDQAQETLKYALELQ).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 6. Flow Cytometry analysis of HEPG2 cells using anti-Alkaline phosphatase/ALPL antibody (AAA19231).Overlay histogram showing HEPG2 cells stained with AAA19231 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Alkaline phosphatase/ALPL Antibody (AAA19231, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



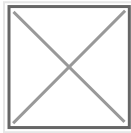
IF (Immunofluorescence)

Figure 5. IF analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (AAA19231).Alkaline phosphatase/ALPL was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL rabbit anti-Alkaline phosphatase/ALPL Antibody (AAA19231) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC (Immunohistochemistry)

Figure 4. IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (AAA19231).Alkaline phosphatase/ALPL was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (AAA19231) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



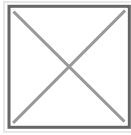
IHC (Immunohistochemistry)

Figure 3. IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (AAA19231).Alkaline phosphatase/ALPL was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (AAA19231) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (AAA19231).Alkaline phosphatase/ALPL was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (AAA19231) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (AAA19231).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 50ug of sample under reducing conditions.Lane 1: human HEK293 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Alkaline phosphatase/ALPL antigen affinity purified polyclonal antibody (Catalog # AAA19231) at 0. 5 μg/mL overnight at 4 degree 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 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # with Tanon 5200 system. A specific band was detected for Alkaline phosphatase/ALPL at approximately 80KD. The expected band size for Alkaline phosphatase/ALPL is at 57KD.

ADDITIONAL INFORMATION

Related Product Information for anti-ALPL antibody

Alkaline phosphatase(ALPL) removes phosphate groups from the 5' end of DNA and RNA, and from proteins, at high pH. Most mammals have 4 different isozymes: placental, placental like, intestinal and non tissue specific(found in liver, kidney and bone). Tissues with particularly high concentrations of ALP include the liver, bile ducts, placenta, and bone. ALPL is the alkaline phosphatase of skin fibroblasts,the tissue-nonspecific type, and that it is active toward millimolar concentrations of the putative natural substrates phosphoethanolamine(PEA) and pyridoxal-5-prime-phosphate(PLP). ALPL gene exists in single copy in the haploid genome and is composed of 12 exons distributed over more than 50 kb. Damaged or diseased tissue releases enzymes into the blood, so serum ALP measurements can be abnormal in many conditions, including bone disease and liver disease.

References	1. Fedde, K. N.; Whyte, M. P. : Alkaline phosphatase (tissue-nonspecific isoenzyme) is a phosphoethanolamine and pyridoxal-5-prime-phosphate ectophosphatase: normal and hypophosphatasia fibroblast study. Am. J. Hum. Genet. 47: 767-775, 1990. 2. Weiss, M. J.; Cole, D. E. C.; Ray, K.; Whyte, M. P.; Lafferty, M. A.; Mulivor, R. A.; Harris, H. : A missense mutation in the human liver/bone/kidney alkaline phosphatase gene causing a lethal form of hypophosphatasia. Proc. Nat. Acad. Sci. 85: 7666-7669, 1988.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	116734717
NCBI GeneID	249
NCBI Accession #	NP_000469.3
NCBI GenBank Nucleotide #	NM_000478.4
UniProt Accession #	P05186; O75090; Q2TAI7; Q59EJ7; Q5BKZ5; Q5VTG5; Q6NZI8; Q8WU32; A1A4E7; B2RMP8; B7Z387; B7Z4Y6
Molecular Weight	57kDa
NCBI Official Full Name	alkaline phosphatase, tissue-nonspecific isozyme isoform 1
NCBI Official Synonym Full Names	alkaline phosphatase, liver/bone/kidney
NCBI Official Symbol	ALPL
NCBI Official Synonym Symbols	HOPS; TNAP; APTNAP; TNSALP; AP-TNAP
NCBI Protein Information	alkaline phosphatase, tissue-nonspecific isozyme; glycerophosphatase; tissue-nonspecific ALP; alkaline phosphomonoesterase; liver/bone/kidney-type alkaline phosphatase; alkaline phosphatase liver/bone/kidney isozyme
UniProt Protein Name	Alkaline phosphatase, tissue-nonspecific isozyme
UniProt Gene Name	ALPL
UniProt Synonym Gene Names	AP-TNAP; TNSALP
UniProt Entry Name	PPBT_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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