

## Anti-Alkaline phosphatase/ALPL Antibody Picoband®

Catalog Number: A01008-1

### About ALPL

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.

### Overview

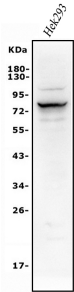
Product Name	Anti-Alkaline phosphatase/ALPL Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Alkaline phosphatase/ALPL Antibody Picoband® catalog # A01008-1. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.01mg NaN <sub>3</sub> .
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P05186

### Technical Details

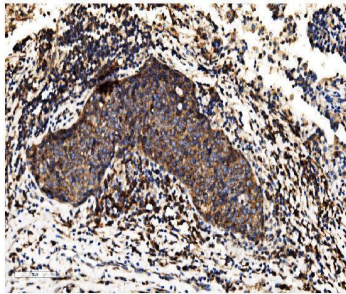
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Alkaline phosphatase/ALPL, which shares 76.2% and 81% amino acid (aa) sequence identity with mouse and rat Alkaline phosphatase/ALPL, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent 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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells, Human

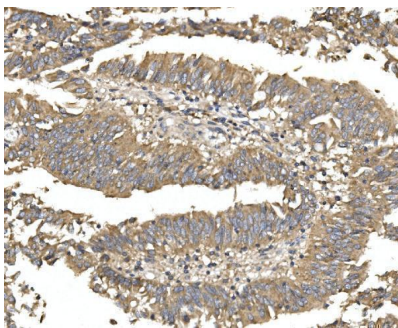
## Anti-Alkaline phosphatase/ALPL Antibody Picoband® (A01008-1) Images



Western blot analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). 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 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 # A01008-1) 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 1:10000 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 Alkaline phosphatase/ALPL at approximately 80KD. The expected band size for Alkaline phosphatase/ALPL is at 57KD.

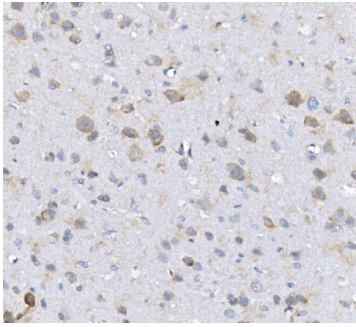


IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Alkaline phosphatase/ALPL was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (A01008-1) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

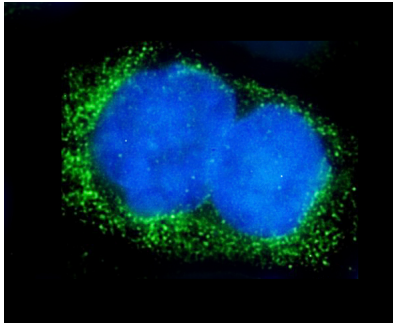


IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Alkaline phosphatase/ALPL was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (A01008-1) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

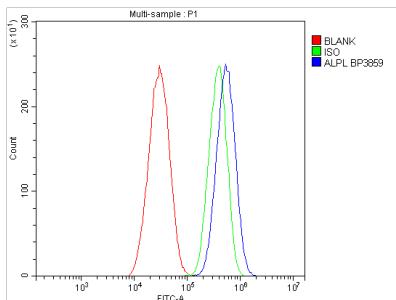
IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Alkaline



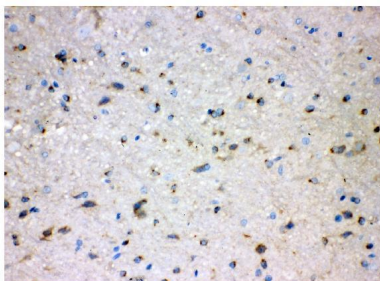
phosphatase/ALPL was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Alkaline phosphatase/ALPL Antibody (A01008-1) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Alkaline phosphatase/ALPL was detected in immunocytochemical section of A431 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 5ug/mL rabbit anti-Alkaline phosphatase/ALPL Antibody (A01008-1) 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 HEPG2 cells using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Overlay histogram showing HEPG2 cells stained with A01008-1 (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-Alkaline phosphatase/ALPL Antibody (A01008-1, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IHC analysis of Alkaline phosphatase/ALPL using anti-Alkaline phosphatase/ALPL antibody (A01008-1). Alkaline phosphatase/ALPL was detected in a paraffin-embedded section of mouse brain 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-Alkaline phosphatase/ALPL Antibody (A01008-1) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

1. PubMed ID: 32018039, Chen G,Wang Q,Li Z,Yang Q,Liu Y,Du Z,Zhang G,Song Y.Circular RNA CDR1as promotes adipogenic and suppresses osteogenic differentiation of BMSCs in steroid-induced osteonecrosis of the femoral head.Bone.2020 Apr;133:115258.doi:10.1016/j.bone.2020.115258.Epub
2. PubMed ID: 32857019, Zhang Y,Yin C,Cheng Y,Huang X,Liu K,Cheng G,Li Z.Electrospinning Nanofiber-Reinforced Aerogels for the Treatment of Bone Defects.Adv Wound Care (New Rochelle).2020 Aug;9(8):441-452.doi:10.1089/wound.2018.0879.Epub 2019 Jun 5.PMID:32857019;PMCID:PMC7382394
3. PubMed ID: 23544509, Yu Ch, Dai Xy, Chen Q, Zang Jn, Deng Ll, Liu Yh, Ying Hz. Carbohydr Polym. 2013 Apr 15;94(1):56-62. Doi: 10.1016/J.Carbpol.2013.01.006. Epub 2013 Jan 11. Hypolipidemic And Antioxidant Activities Of Polysaccharides From Rosae Laevigatae Fructus In ...

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