BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Cathepsin B/CTSB Antibody Picoband®

Catalog Number: PB9046

About CTSB

Cathepsin B is an enzymatic protein belonging to the peptidase or protease families. In humans, it is coded by the CTSB gene. And this gene is mapped to chromosome 8p22. The protein encoded by this gene is a lysosomal cysteine proteinase composed of a dimer of disulfide-linked heavy and light chains, both produced from a single protein precursor. It is a member of the peptidase C1 family. Cathepsin B was once suspected as a candidate protease participating in the conversion of beta-amyloid precursor protein into the amyloid plaques found in Alzheimer's disease patients. However, this function is now known to be mediated by BACE1 protease. It is now thought that cathepsin B can degrade beta-amyloid precursor protein into harmless fragments. Thus, it is conceivable cathepsin B may play a pivotal role in the natural defense against Alzheimer's disease. Overexpression of cathepsin B has been associated with esophageal adenocarcinoma and other tumors. At least five transcript variants encoding the same protein have been found for this gene. The standard product used in this kit is recombinant human Cathepsin B with the molecular mass of 37KDa.

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Overview

Product Name	Anti-Cathepsin B/CTSB Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Cathepsin B/CTSB Antibody Picoband® catalog # PB9046. Tested in WB applications. This antibody reacts with Human. 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	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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

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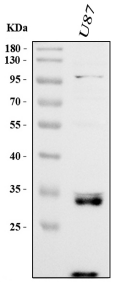
Uniprot ID	P07858

Technical Details

Immunogen	E.coli-derived human Cathepsin B recombinant protein (Position: L80-D333). Human Cathepsin B shares 83% and 84% amino acid (aa) sequences identity with mouse and rat Cathepsin B, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
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, 0.1-0.5ug/ml, Human

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Anti-Cathepsin B/CTSB Antibody Picoband® (PB9046) Images



Western blot analysis of Cathepsin B using anti-Cathepsin B antibody (PB9046). 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 5 ng of sample under reducing conditions. Lane 1: human U87 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-Cathepsin B antigen affinity purified polyclonal antibody (Catalog # PB9046) 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 Cathepsin B at approximately 33 kDa. The expected band size for Cathepsin B is at 38 kDa.

3 Publications Citing This Product

1. PubMed ID: 24818882, Yang D, L?? X, Hong Y, Xi T, Zhang D. Biomaterials. 2014 Aug;35(24):6195-205. Doi: 10.1016/J.Biomaterials.2014.04.069. Epub 2014 May 10. The Molecular Mechanism For Effects Of Tin Coating On Niti Alloy On Endothelial Cell Function.

2. PubMed ID: 24878992, Zhang Zy, Mai Y, Yang H, Dong Py, Zheng Xl, Yang Gs. Mol Cell Biochem. 2014 Oct;395(1-2):53-64. Doi: 10.1007/S11010-014-2111-6. Epub 2014 May 31. Ctsb Promotes Porcine Preadipocytes Differentiation By Degrading Fibronectin And Attenuating The Wnt/...

3. PubMed ID: 27310928, Inhibition of autophagosome-lysosome fusion by ginsenoside Ro via the ESR2-NCF1-ROS pathway sensitizes esophageal cancer cells to 5-fluorouracil-induced cell death via the CHEK1-mediated DNA damage checkpoint

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