BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-CD3 epsilon/CD3E Antibody Picoband®

Catalog Number: PB9093

About CD3E

CD3e molecule, epsilon also known as CD3E is a polypeptide which in humans is encoded by the CD3E gene which resides on chromosome 11. It is mapped to 11q23.3. The protein encoded by this gene is the CD3-epsilon polypeptide, which together with CD3-gamma, -delta and -zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11. The epsilon polypeptide plays an essential role in T-cell development.

Overview

Product Name	Anti-CD3 epsilon/CD3E Antibody Picoband®
Reactive Species	Chicken, Human, Mouse, Rat
Description	Boster Bio Anti-CD3 epsilon/CD3E Antibody Picoband® catalog # PB9093. Tested in IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Chicken, 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	IF, IHC, IHC-F, 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
Uniprot ID	P07766

Technical Details

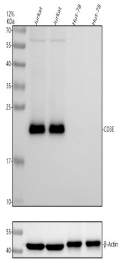
Immunogen	E.coli-derived human CD3 epsilon recombinant protein (Position: D23-I207). Human CD3 epsilon shares 65% amino acid (aa) sequence identity with mouse CD3 epsilon.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

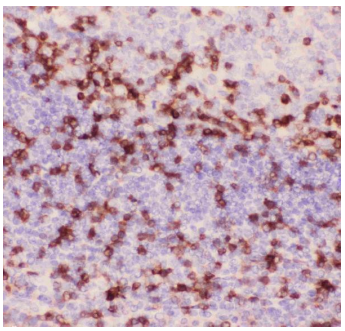
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, Chicken Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Mouse, Rat Immunocytochemistry , 0.5-1ug/ml, Human Immunofluorescence, 2ug/ml, Human, Mouse, Rat

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

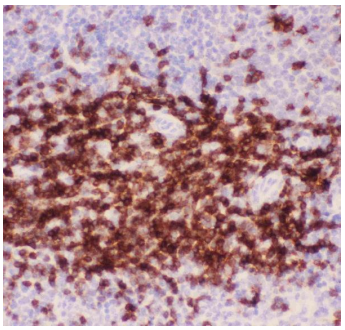
Anti-CD3 epsilon/CD3E Antibody Picoband® (PB9093) Images



Western blot analysis of CD3E using anti-CD3E antibody (PB9093). 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 Jurkat whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human Hut-78 whole cell lysates, Lane 4: human Hut-78 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-CD3E antigen affinity purified polyclonal antibody (Catalog # PB9093) 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 CD3E at approximately 23 kDa. The expected band size for CD3E is at 23 kDa.



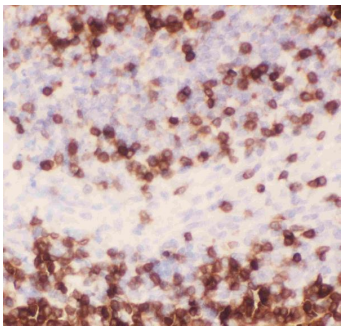
IHC analysis of CD3 Epsilon using anti-CD3 Epsilon antibody (PB9093). CD3 Epsilon was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD3 Epsilon Antibody (PB9093) 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.



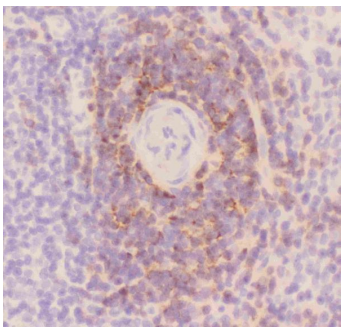
IHC analysis of CD3 Epsilon using anti-CD3 Epsilon antibody (PB9093). CD3 Epsilon was detected in paraffin-embedded section of mouse spleen tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD3 Epsilon Antibody (PB9093) 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 CD3 Epsilon using anti-CD3 Epsilon antibody (PB9093). CD3 Epsilon was detected in paraffin-embedded section of rat spleen tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope

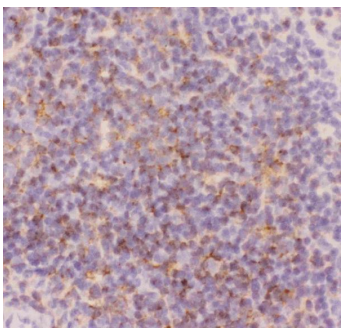
BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



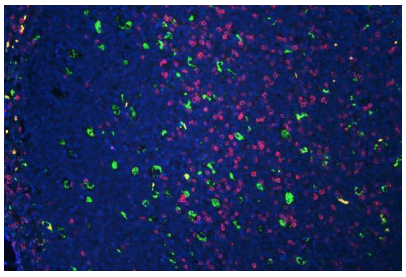
retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD3 Epsilon Antibody (PB9093) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of CD3 Epsilon using anti-CD3 Epsilon antibody (PB9093). CD3 Epsilon was detected in frozen section of rat spleen tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD3 Epsilon Antibody (PB9093) 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.



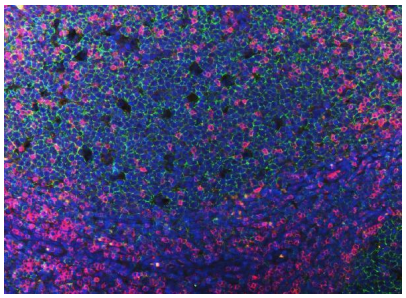
IHC analysis of CD3 Epsilon using anti-CD3 Epsilon antibody (PB9093). CD3 Epsilon was detected in frozen section of mouse spleen tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD3 Epsilon Antibody (PB9093) overnight at 4°C. Biotinylated 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.



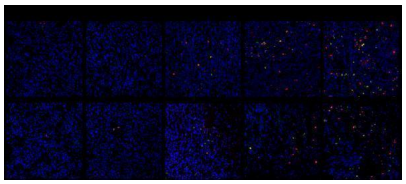
IF analysis of CD3E and CD68 using anti-CD3E antibody (PB9093) and anti-CD68 antibody (M00602) CD3E and CD68 was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-CD3E Antibody (PB9093) and mouse anti CD68 Antibody(M00602) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) and Biotin conjugated goat anti-rabbit IgG (BA1003) were used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

IF analysis of CD3E and CD20 using anti-CD3E antibody (PB9093) and anti-CD20 antibody (M03780-5). CD3E and CD20 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval

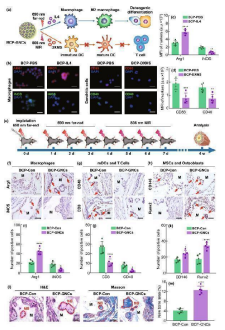
BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



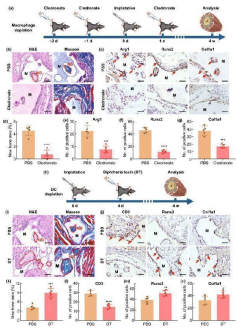
solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/mL rabbit anti-CD3E antibody (PB9093) and mouse anti-CD20 antibody (M03780-5) overnight at 4°C. DyLight®550 Conjugated Goat Anti-Rabbit IgG (BA1135), DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) 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.



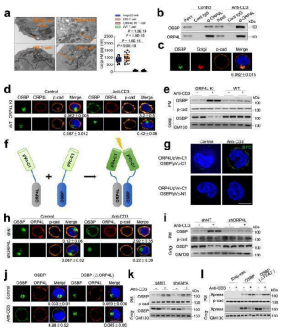
IF analysis of CD3E using anti-CD3E antibody (PB9093). CD3E was detected in a paraffin-embedded section of mouse 4T1 cell xenograft tumor tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:200 rabbit anti-CD3E Antibody (PB9093) overnight at 4°C. DyLight 550-conjugated Goat Anti-Rabbit was used as secondary antibody incubated for 1 hour at RT. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



a Schematic diagram of BCP-GNCs-mediated macrophage polarization and DC maturation by releasing IL-4 and DXMS. b IF staining of Arg1 (red) and iNOS (green) of macrophage, CD83 (red) and CD40 (green) of DC and nuclei (blue) after macrophages or DCs seeded on the BCP with 690 nm far-red or 808 nm NIR stimulating the release of PBS (BCP-PBS), 690 nm far-red stimulating the release of IL-4 (BCP-IL4) or 808 nm NIR stimulating the release of DXMS (BCP-DXMS) for 24 h. Scale bar = 5 um. c, d Semiquantification of positively stained cells in (b). n = 5, ** P



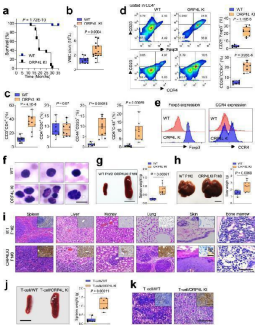
a Implementation strategy of clodronate on macrophages depletion. b H&E and Masson staining of BCP implant area treating with PBS or clodronate in vivo after implant 4 weeks (the red dash line shows the new bone formation area; NB, new bone; M, material). Scale bar = 100 um. c IHC staining of M2 macrophages (Arg1) and osteoblasts (Runx2, Col1a1) under the BCP implant treating with PBS or clodronate in vivo. Scale bar = 100 um. Red arrow, positive cells. M, material. d – g Semiquantification of new bone area and positively stained cells in (b, c). n = 5, *** P



OSBP translocates from Golgi to PM via interacting with ORP4L. a Electron micrographs of ORP4L KI and wild-type T-cells, HepG2 and 293 T cells. Scale bar, 100 nm. Black triangles present in dividual data points for n = 20 cells from one or cell line. The central mark indicates the median, the bottom and top edges of the box indicate the interquartile range, and the whiskers represent the maximum and minimum point. One-way ANOVA test with a confidence interval of 95% was used to compute statistics. b Co-immunoprecipitation analysis of ORP4L binding to OSBP in ORP4L KI T-cells with or without anti-CD3 stimulation. c The

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

localization of OSBP in ORP4L KI T-cells. Scale bar, 10 um. d The localization of OSBP in ORP4L KI and wild-type T-cells with or without anti-CD3 stimulation. Scale bar, 10 um. e Western blot analysis of OSBP protein levels in PM and Golgi of ORP4L KI or wild-type T-cells. f A schematic representation describing the BiFC technique. g Interactions between ORP4L/pVn-C1 and OSBP/pVc-C1 in ORP4L KI T-cells as determined by BiFC. Scar bar, 10 um. h The localization of OSBP in ORP4L KI T-cells upon ORP4L knockdown. Scar bar, 10 um. i Western blot analysis of OSBP protein levels in PM and Golgi of ORP4L KI T-cells upon ORP4L knockdown. j The localization of overexpressed wild-type OSBP or OSBP (△ ORP4L) in ORP4L KI T-cells. Scar bar, 10 um. k Western blot analysis of OSBP protein levels in PM and Golgi of ORP4L KI T-cells with or without VAPA knockdown. l Western blot analysis of overexpressed wild-type OSBP or OSBP(△ FFAT) protein levels in the PM and Golgi of ORP4L KI T-cells. Confocal microscopy and blot images are representative of n = 3 biological replicates with similar results. The same experiments were repeated twice in T-cells from two mice. In (c , d , h and j), the ration of OSBP fluorescence density from n = 10 cells from one between PM and Golgi are shown below. Source data are provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 35906240



Pathological findings of T-cell leukemia in ORP4L KI mice. a Kaplan–Meier comparative survival analysis of ORP4L KI and WT littermate mice (n = 20 mice per group, Log-rank test). b White blood cell count on peripheral blood of ORP4L KI and WT littermate mice. Black triangles present in dividual data points for n = 15 (ORP4L KI) and n = 12 (WT) mice. c The percentage of indicated cells in peripheral blood of ORP4L KI and WT littermate mice. Black triangles present in dividual data points for n = 10 mice. d Percentage of CD25 + Foxp3 + or CD25 + CCR4 + cells in peripheral blood of ORP4L KI and WT littermate mice. Black triangles present in dividual data points for n = 8 (ORP4L KI) and n = 6 (WT) mice. e Flow cytometry analysis of Foxp3 and CCR4 expression in ORP4L KI and WT littermate mice. The same experiments were repeated twice in two mice. f Representative blood smears of ORP4L KI and WT littermate mice (n = 3 mice). Scale bars, 10 um. g , h Splenomegaly and hepatomegaly in ORP4L KI mice. The right panels illustrate the organ weights. Black triangles present in dividual data points for n = 10 (ORP4L KI) and n = 6 (WT) mice. Scale bars, 1 cm. i Representative H&E-staining of organs in ORP4L KI mice. Immunohistochemical anti-CD3 antibody staining (inserts) of the tissues is shown. Scale bars, 100 um. j Gross and histological findings of splenomegaly in B-NDG mice after transplantation of spleen cells from ORP4L KI mice. Black triangles present in dividual data points for n = 6 mice. Scale bars, 1 cm. k Representative H&E and anti-CD3 antibody staining of spleen of j . Scale bars, 100 um. Images of i and k are representative of n = 3 biological replicates with similar results. The same experiments were repeated twice in two mice. In each box plot, the central mark indicates the median, the bottom and top edges of the box indicate the interquartile range, and the whiskers represent the maximum and minimum point. Two-tailed unpaired t -test with a confidence interval of 95% was used to compute

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

statistics. P -values are indicated in the figures. Source data are provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 35906240

8 Publications Citing This Product

1. PubMed ID: 10.1021/acsami.1c08290, Combination of Chidamide-Mediated Epigenetic Modulation with Immunotherapy: Boosting Tumor Immunogenicity and Response to PD-1/PD-L1 Blockade

2. PubMed ID: , Dual-Wavelength Photosensitive Nano-in-Micro Scaffold Regulates Innate and Adaptive Immune Responses for Osteogenesis

3. PubMed ID: 20470401, Li Y, Geng S, Yin Q, Chen S, Yang L, Wu X, Li B, Du X, Schmidt Ca, Przybylski Gk. J Transl Med. 2010 May 14;8:47. Doi: 10.1186/1479-5876-8-47. Decreased Level Of Recent Thymic Emigrants In Cd4+ And Cd8+T Cells From Cml Patients.

Visit bosterbio.com/anti-cd3-epsilon-picoband-trade-antibody-pb9093-boster.html to see all 8 publications.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a $20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.

Anti-CD3 epsilon/CD3E Antibody

For Research Use Only. Not for use in diagnostic procedures.