BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
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Anti-CD10/MME Antibody Picoband®

Catalog Number: PB9058

About MME

CD10, also known as membrane metallo-endopeptidase, neutral endopeptidase (NEP), Neprilysin, or common acute lymphoblastic leukemia antigen (CALLA), is a zinc-dependent metalloprotease enzyme that degrades a number of small secreted peptides, most notably theamyloid beta peptide whose abnormal misfolding and aggregation in neural tissue has been implicated as a cause of Alzheimer's disease. This gene is localized to human chromosome 3 by study of somatic cell hybrids and regionalized the location to 3q21-q27 by in situ hybridization. By cDNA transfection analysis, CD10 is confirmed as a functional neutral endopeptidase of the type that has previously been called enkephalinase. CD10 has also been called atriopeptidase. Atriopeptidase specifically degrades atrial natriuretic factor. A specific enzyme inhibitor was developed and reported that it had effects similar to those of low-dose ANF infusion. These effects include diuresis, natriuresis, vasodilatation, and suppression of the renin-angiotensin-aldosterone system.

Overview

Product Name	Anti-CD10/MME Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-CD10/MME Antibody Picoband® catalog # PB9058. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P08473

Technical Details

Immunogen	E.coli-derived human CD10 recombinant protein (Position: Y52-W750). Human CD10 shares 94% amino acid (aa) sequences identity with both mouse and rat CD10.
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).
Cross Reactivity	No cross-reactivity with other proteins

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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, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human

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Anti-CD10/MME Antibody Picoband® (PB9058) Images

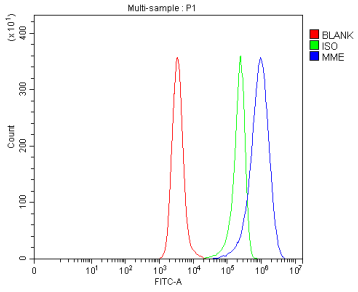

Figure 5. Flow Cytometry analysis of Daudi cells using anti-CD10/MME antibody (PB9058).
Overlay histogram showing Daudi cells stained with PB9058 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-CD10/MME Antibody (PB9058, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

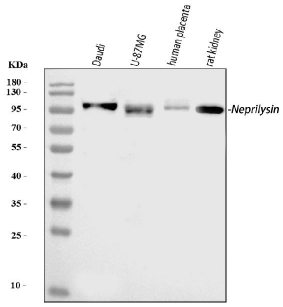

Figure 1. Western blot analysis of CD10/MME using anti-CD10/MME antibody (PB9058).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Daudi whole cell lysates,
Lane 2: human U-87MG whole cell lysates,
Lane 3: human placenta tissue lysates,
Lane 4: rat kidney 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-CD10/MME antigen affinity purified polyclonal antibody (Catalog # PB9058) 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 CD10/MME at approximately 100 kDa. The expected band size for CD10/MME is at 85 kDa.

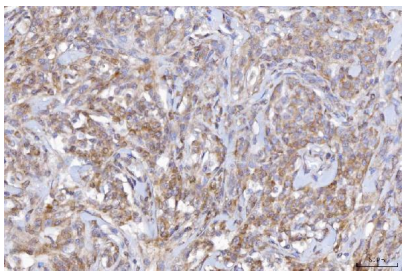

Figure 2. IHC analysis of CD10/MME using anti-CD10/MME antibody (PB9058).
CD10/MME was detected in a paraffin-embedded section of human lymphoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD10/MME Antibody (PB9058) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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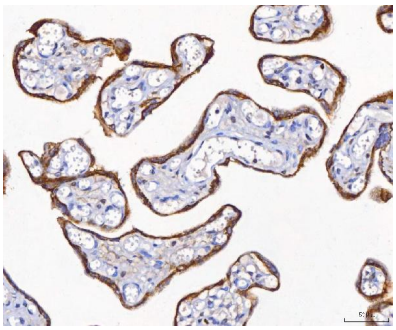

Figure 3. IHC analysis of CD10/MME using anti-CD10/MME antibody (PB9058).
CD10/MME was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD10/MME Antibody (PB9058) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

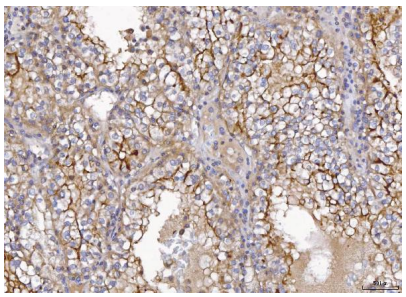

Figure 4. IHC analysis of CD10/MME using anti-CD10/MME antibody (PB9058).
CD10/MME was detected in a paraffin-embedded section of human renal cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD10/MME Antibody (PB9058) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

7 Publications Citing This Product

1. PubMed ID: PMID:31966612, Clinical biocharacterization of immunophenotype in hepatocellular carcinoma patients

2. PubMed ID: 10.3109/10799893.2016.1155068, Neutral endopeptidase and natriuretic peptide receptors participate in the regulation of C-type natriuretic peptide expression in renal interstitial fibrosis

3. PubMed ID: 10.1177/039463201102400404, Identification of Differentially-Expressed Proteins between Early Submucosal Non-Invasive and Invasive Colorectal Cancer Using 2D-DIGE and Mass Spectrometry:

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