

## Anti-CEBP Beta/CEBPB Antibody Picoband™

Catalog Number: PB9171

### About CEBPB

CCAAT/enhancer-binding protein beta, also known as is CEBP-beta, is a protein that in humans is encoded by the CEBPB gene. It mapped to 20q13.13. The protein encoded by this intronless gene is a bZIP transcription factor that can bind as a homodimer to certain DNA regulatory regions. It can also form heterodimers with the related proteins CEBP-alpha, CEBP-delta, and CEBP-gamma. The encoded protein is important in the regulation of genes involved in immune and inflammatory responses and has been shown to bind to the IL-1 response element in the IL-6 gene, as well as to regulatory regions of several acute-phase and cytokine genes. In addition, the encoded protein can bind the promoter and upstream element and stimulate the expression of the collagen type I gene. CEBP-beta is critical for normal macrophage functioning, an important immune cell sub-type. Observational work has shown that expression of CEBP-beta in blood leukocytes is positively associated with muscle strength in humans, emphasizing the importance of the immune system, and particularly macrophages, in the maintenance of muscle function.

### Overview

Product Name	Anti-CEBP Beta/CEBPB Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CEBP Beta/CEBPB Antibody Picoband™ catalog # PB9171. Tested in IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P17676

### Technical Details

Immunogen	E.coli-derived human CEBP Beta recombinant protein (Position: M1-A200). Human CEBP Beta shares 61% amino acid (aa) sequence identity with both mouse and rat CEBP Beta.
Predicted Reactive Species	Hamster
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.
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat</p> <p>Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human</p> <p>Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human</p>

## Anti-CEBP Beta/CEBPB Antibody Picoband™ (PB9171) Images

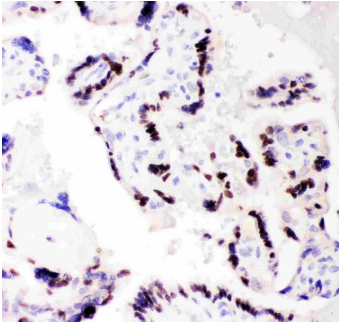


Figure 2. IHC analysis of CEBP Beta using anti-CEBP Beta antibody (PB9171). CEBP Beta was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-CEBP Beta Antibody (PB9171) 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.

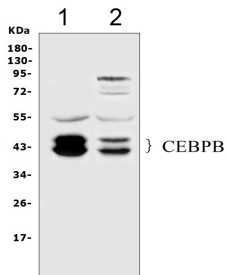


Figure 1. Western blot analysis of CEBP Beta using anti-CEBP Beta antibody (PB9171).

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 Hela whole cell lysates,  
Lane 2: human Caco-2 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-CEBP Beta antigen affinity purified polyclonal antibody (Catalog # PB9171) 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 CEBP Beta at approximately 42-46KD. The expected band size for CEBP Beta is at 36KD.

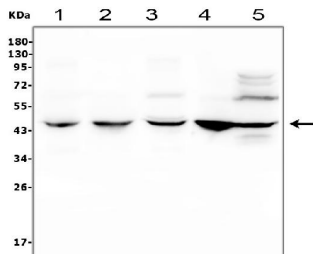


Figure 3. Western blot analysis of CEBP Beta using anti-CEBP Beta antibody (PB9171).

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: rat liver tissue lysates,  
Lane 2: rat kidney tissue lysates,  
Lane 3: mouse liver tissue lysates,  
Lane 4: mouse kidney tissue lysates,  
Lane 5: human Hela 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-CEBP Beta antigen affinity purified polyclonal antibody (Catalog # PB9171) 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 CEBP Beta at approximately 46KD. The expected band size for CEBP Beta is at 36KD.

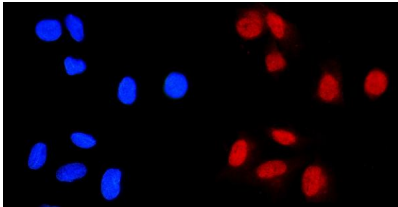


Figure 4. IF analysis of CEBP Beta using anti-CEBP Beta antibody (PB9171). CEBP Beta was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-CEBP Beta Antibody (PB9171) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) 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.

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