

Anti-CEBP Alpha/CEBPA Antibody Picoband®

Catalog Number: A00386-1

About CEBPA

CEBPA, CCAAT/enhancer-binding protein alpha is a protein that in humans is encoded by the CEBPA gene. The CEBPA gene is intronless. Using human/hamster somatic cell hybrids containing restricted fragments of human chromosome 19, the CEBPA gene is mapped to chromosome 19q13.1, between the GPI and TGFB1 genes. The protein encoded by this intronless gene is a bZIP transcription factor which can bind as a homodimer to certain promoters and enhancers. It can also form heterodimers with the related proteins CEBP-beta and CEBP-gamma. The encoded protein has been shown to bind to the promoter and modulate the expression of the gene encoding leptin, a protein that plays an important role in body weight homeostasis.

Overview

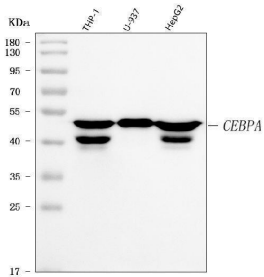
Product Name	Anti-CEBP Alpha/CEBPA Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CEBP Alpha/CEBPA Antibody Picoband® catalog # A00386-1. Tested in ELISA, Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody 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	ELISA, Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	P49715

Technical Details

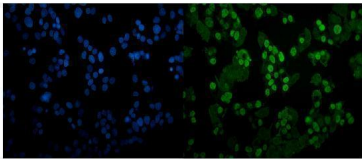
Immunogen	E.coli-derived human CEBP Alpha/CEBPA recombinant protein (Position: Y138-Q221).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross 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 Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5ug/ml, -

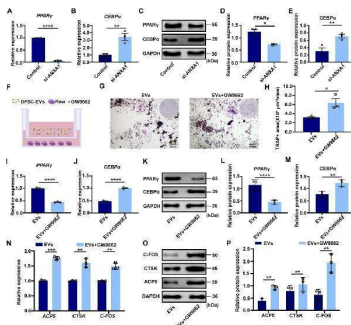
Anti-CEBP Alpha/CEBPA Antibody Picoband® (A00386-1) Images



Western blot analysis of CEBP using anti-CEBP antibody (A00386-1). 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 30 ug of sample under reducing conditions. Lane 1: human THP-1 whole cell lysates, Lane 2: human U-937 whole cell lysates, Lane 3: human HepG2 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-CEBP antigen affinity purified polyclonal antibody (Catalog # A00386-1) 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 1:5000 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 CEBP at approximately 42 kDa. The expected band size for CEBP is at 37 kDa.

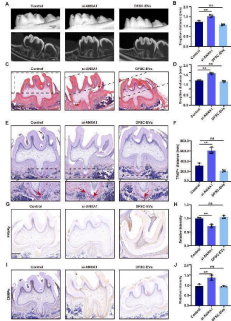


IF analysis of CEBP Alpha/CEBPA using anti-CEBP Alpha/CEBPA antibody (A00386-1). CEBP Alpha/CEBPA was detected in immunocytochemical section of HepG2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-CEBP Alpha/CEBPA Antibody (A00386-1) 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.

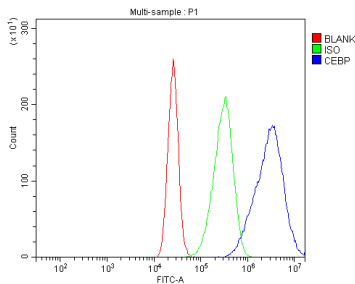


ANXA1 mediated PPARgamma-CEBPalpha pathway to regulate osteoclast differentiation (A) The mRNA level of PPARgamma in RAW264.7 cultured with siANXA1-EVs. (B) The mRNA level of CEBPalpha in RAW264.7 cultured with siANXA1-EVs. (C) The protein level of PPARgamma and CEBPalpha in RAW264.7 cultured with siANXA1-EVs. (D) Quantitative analysis of PPARgamma protein expression. (E) Quantitative analysis of CEBPalpha protein expression. (F) Schematic illustration of PPARgamma inhibited RAW264.7 and DFSC-EVs co-culture system. (G) Representative images of TRAP staining. Scale bar = 200 um. (H) Quantitative analysis of TRAP-positive area. (I) PPARgamma inhibited RAW264.7 construction. (J) The mRNA level of CEBPalpha in PPARgamma inhibited RAW264.7. (K) The protein level of PPARgamma and CEBPalpha in PPARgamma inhibited RAW264.7. (L) Quantitative analysis of PPARgamma protein expression. (M) Quantitative analysis of CEBPalpha protein expression. (N) The mRNA level of ACP5 , CTSK and CFOS in PPARgamma inhibited RAW264.7. (O) The protein level of

ACPF5, CTSK and CFOS in PPARgamma inhibited RAW264.7. (P) Western blotting quantification. * p < 0.05, ** p < 0.01, *** p < 0.001, **** p < 0.0001. n = 3. Index in PubMed under a CC BY license. PMID: 39834384



DFSCs-EVs/ANXA1 regulating tooth eruption by affecting osteoclast differentiation. (A) Representative micro-CT images of detecting tooth eruption distance. (B) Analysis of tooth eruption distance based on micro-CT. (C) Representative H&E staining images of the first mandibular molar area. (D) Analysis of tooth eruption distance based on H&E staining. (E) Representative images of TRAP staining. (F) Quantitative analysis of TRAP-positive area. (G) Representative immunohistochemistry staining images of PPARgamma expression in the first mandibular molar area. (H) Quantitative analysis of PPARgamma expression in the first mandibular molar area. (I) Representative immunohistochemistry staining images of CEBPalph expression in the first mandibular molar area. (J) Quantitative analysis of CEBPalph expression in the first mandibular molar area. ns, not significant. Scale bar = 1 mm ** p < 0.01. n = 3. Index in PubMed under a CC BY license. PMID: 39834384



Flow Cytometry analysis of CACO-2 cells using anti-CEBP Alpha/CEBPA antibody (A00386-1). Overlay histogram showing CACO-2 cells stained with A00386-1 (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-CEBP Alpha/CEBPA Antibody (A00386-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

3 Publications Citing This Product

1. PubMed ID: 10.1038/s41598-018-27501-2, LncRNA expression profiling of BMSCs in osteonecrosis of the femoral head associated with increased adipogenic and decreased osteogenic differentiation
2. PubMed ID: 10.1002/lipd.12234, beta γ Cypermethrin Alleviated the Inhibitory Effect of Medium from RAW 264.7 Cells on 3T3 γ L1 Cell Maturation into Adipocytes
3. 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.Epu

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