

Anti-Carbonic Anhydrase III/CA3 Antibody Picoband®

Catalog Number: PB10049

About CA3

Carbonic anhydrase III (CA3) is an enzyme that in humans is encoded by the CA3 gene. CA3 is a member of a multigene family (at least six separate genes are known) that encode carbonic anhydrase isozymes. The gene spans 10.3 kb and contains seven exons and six introns. Using a cDNA clone of the CA3 gene in the study of human-rodent hybrids, the gene was mapped to chromosome 8 which carries a cluster of CA genes. The expression of the CA3 gene is strictly tissue specific and present at high levels in skeletal muscle and much lower levels in cardiac and smooth muscle. A proportion of carriers of Duchenne muscle dystrophy have a higher CA3 level than normal.

Overview

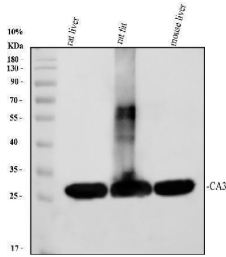
Product Name	Anti-Carbonic Anhydrase III/CA3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Carbonic Anhydrase III/CA3 Antibody Picoband® catalog # PB10049. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg NaN ₃ . *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	P07451

Technical Details

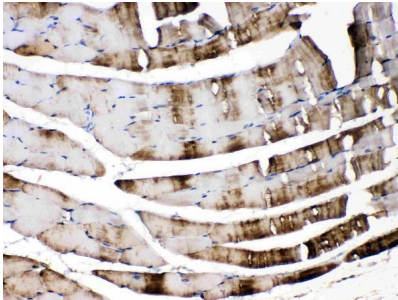
Immunogen	E. coli-derived human CA3 recombinant protein (Position: D14-E235). Human CA3 shares 92.3% and 91.4% amino acid (aa) sequence identity with mouse and rat CA3, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).

Cross Reactivity	No cross-reactivity with other proteins
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	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Western blot, 0.1-0.5ug/ml, Mouse, Rat, Human

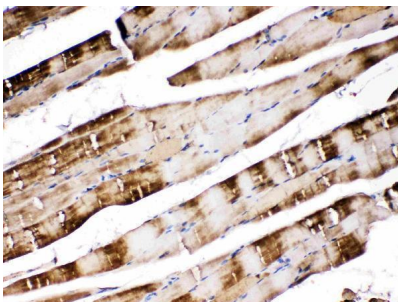
Anti-Carbonic Anhydrase III/CA3 Antibody Picoband® (PB10049) Images



Western blot analysis of CA3 using anti-CA3 antibody (PB10049). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: rat fat tissue lysates, Lane 3: mouse liver 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-CA3 antigen affinity purified polyclonal antibody (PB10049) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for CA3 at approximately 30 kDa. The expected band size for CA3 is at 30 kDa.

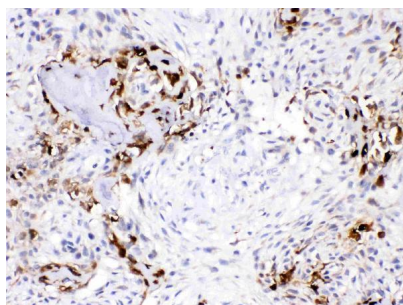


IHC analysis of CA3 using anti-CA3 antibody (PB10049). CA3 was detected in a paraffin-embedded section of mouse skeletal muscle tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-CA3 Antibody (PB10049) 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.



IHC analysis of CA3 using anti-CA3 antibody (PB10049). CA3 was detected in a paraffin-embedded section of rat skeletal muscle 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-CA3 Antibody (PB10049) 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.

IHC analysis of CA3 using anti-CA3 antibody (PB10049). CA3 was detected in a paraffin-embedded section of human osteosarcoma 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-CA3 Antibody (PB10049) 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.

1 Publications Citing This Product

1. PubMed ID: 21956205, Lan F, Yue X, Han L, Shi Z, Yang Y, Pu P, Yao Z, Kang C. Int J Oncol. 2012 Feb;40(2):519-26. Doi: 10.3892/Ijo.2011.1215. Epub 2011 Sep 28. Genome-Wide Identification Of Tcf7L2/Tcf4 Target Mirnas Reveals A Role For Mir-21 In Wnt-Driven Epithelial C...

Visit bosterbio.com/anti-ca3-picoband-trade-antibody-pb10049-boster.html to see all 1 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-Carbonic Anhydrase III/CA3 Antibody

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