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Anti-NDUFB10 Antibody Picoband®

Catalog Number: A11886-3

About NDUFB10

NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 10 is an enzyme that in humans is encoded by the NDUFB10 gene. The protein encoded by this gene is an accessory subunit of the multisubunit NADH:ubiquinone oxidoreductase (complex I) that is not directly involved in catalysis. Mammalian complex I is composed of 45 different subunits. It locates at the mitochondrial inner membrane. This protein complex has NADH dehydrogenase activity and oxidoreductase activity. It transfers electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone. Alternative splicing occurs at this locus and two transcript variants encoding distinct isoforms have been identified.[7] Initially, NADH binds to Complex I and transfers two electrons to the isoalloxazine ring of the flavin mononucleotide (FMN) prosthetic arm to form FMNH2. The electrons are transferred through a series of iron-sulfur (Fe-S) clusters in the prosthetic arm and finally to coenzyme Q10 (CoQ), which is reduced to ubiquinol (CoQH2). The flow of electrons changes the redox state of the protein, resulting in a conformational change and pK shift of the ionizable side chain, which pumps four hydrogen ions out of the mitochondrial matrix.

Overview

Product Name	Anti-NDUFB10 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-NDUFB10 Antibody Picoband® catalog # A11886-3. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, 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	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg 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	O96000

Technical Details

Immunogen	E.coli-derived human NDUFB10 recombinant protein (Position: D36-S172).
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) and ICC.
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, 0.1-0.25ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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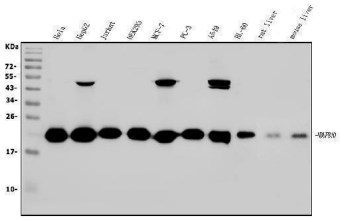
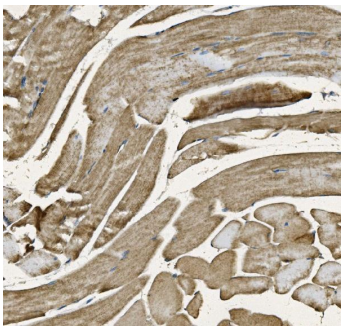
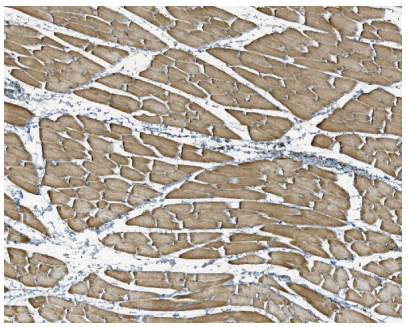
Anti-NDUFB10 Antibody Picoband® (A11886-3) Images



Western blot analysis of NDUFB10 using anti-NDUFB10 antibody (A11886-3). 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 HEPG2 whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: human HEK293 whole cell lysates, Lane 5: human MCF-7 whole cell lysates, Lane 6: human PC-3 whole cell lysates, Lane 7: human A549 whole cell lysates, Lane 8: human HL-60 whole cell lysates, Lane 9: rat liver tissue lysates, Lane 10: mouse liver tissue 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-NDUFB10 antigen affinity purified polyclonal antibody (Catalog # A11886-3) at 0.25 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 NDUFB10 at approximately 22KD. The expected band size for NDUFB10 is at 22KD.



IHC analysis of NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of mouse skeletal muscle tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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 NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of rat skeletal muscle tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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.

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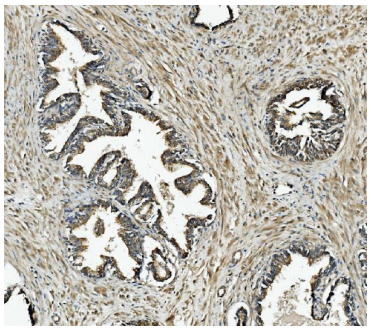
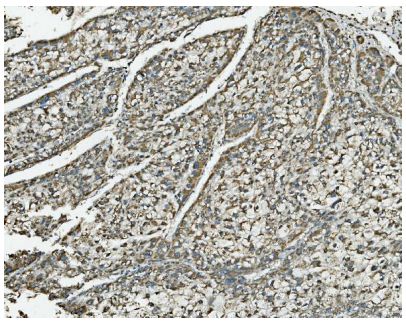
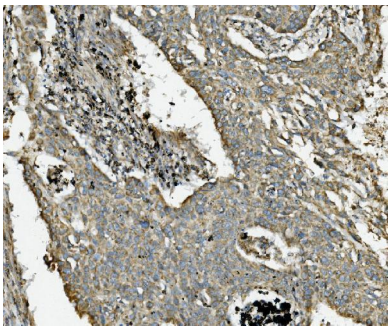


IHC analysis of NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of human prostate cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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 NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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 NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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 NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-NDUFB10 Antibody (A11886-3) 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 NDUFB10 using anti-NDUFB10 antibody (A11886-3). NDUFB10 was detected in immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent

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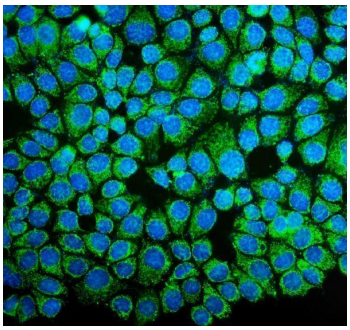
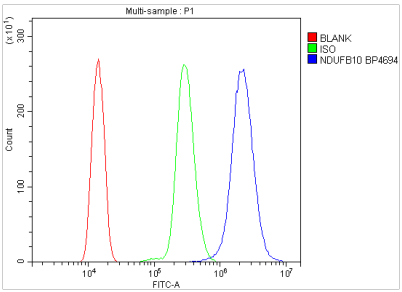


(AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-NDUFB10 Antibody (A11886-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of HL-60 cells using anti-NDUFB10 antibody (A11886-3). Overlay histogram showing HL-60 cells stained with A11886-3 (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-NDUFB10 Antibody (A11886-3, 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.

Anti-NDUFB10 Antibody

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