

## Anti-NDUFA1 Antibody Picoband®

Catalog Number: A08224

### About NDUFA1

NDUFA1(NADH-UBIQUINONE OXIDOREDUCTASE 1 ALPHA SUBCOMPLEX, 1), also called MWFE, B. TAURUS, HOMOLOG OF, encodes a subunit of mitochondrial NADH: ubiquinone oxidoreductase, also known as mitochondrial complex I. The NDUFA1 gene is mapped to chromosome Xq24. The deduced polypeptide sequence of NDUFA1 was found to have an N-terminal hydrophobic domain, likely to be a transmembrane domain, and a C-terminal hydrophilic domain. And the NDUFA1 gene contains 3 exons and spans about 5.0 kb of genomic DNA. Complementation with hamster Ndufa1 cDNA restored the rotenone-sensitive complex I activity of these mutant cells to approximately 100% of the parent cell activity. The findings established that the MWFE polypeptide is absolutely essential for an active complex I in mammals. The NDUFA1 peptide is one of about 31 components of the "hydrophobic protein"(HP) fraction of complex I which is involved in proton translocation. Thus the NDUFA1 peptide may also participate in that function.

### Overview

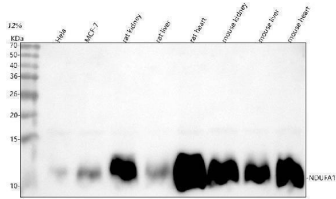
Product Name	Anti-NDUFA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-NDUFA1 Antibody Picoband® catalog # A08224. Tested in WB, IHC, ELISA applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	O15239

### Technical Details

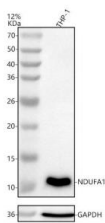
Immunogen	E.coli-derived human NDUFA1 recombinant protein (Position: M1-D70). Human NDUFA1 shares 82.9% amino acid (aa) sequence identity with mouse NDUFA1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
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, 0.1-0.25 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human ELISA, 0.1-0.5 ug/ml, -

## Anti-NDUFA1 Antibody Picoband® (A08224) Images

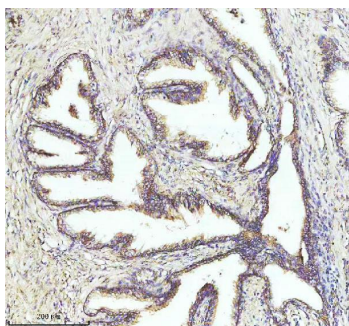


Western blot analysis of NDUFA1 using anti-NDUFA1 antibody (A08224). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: rat kidney tissue lysates, Lane 4: rat liver tissue lysates, Lane 5: rat heart tissue lysates, Lane 6: mouse kidney tissue lysates, Lane 7: mouse liver tissue lysates, Lane 8: mouse heart 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-NDUFA1 antigen affinity purified polyclonal antibody (Catalog # A08224) 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 NDUFA1 at approximately 10 kDa. The expected band size for NDUFA1 is at 8 kDa.

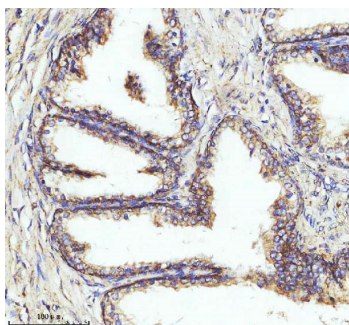


Western blot analysis of NDUFA1 using anti-NDUFA1 antibody (A08224). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human THP-1 whole cell lysates. 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-NDUFA1 antigen affinity purified polyclonal antibody (A08224) 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 NDUFA1 at approximately 10 kDa. The expected band size for NDUFA1 is at 8 kDa.

IHC analysis of NDUFA1 using anti-NDUFA1 antibody (A08224). NDUFA1 was detected in a paraffin-embedded section of human prostate cancer 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-NDUFA1 Antibody (A08224) 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.



IHC analysis of NDUF1 using anti-NDUF1 antibody (A08224). NDUF1 was detected in a paraffin-embedded section of human prostate cancer 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-NDUF1 Antibody (A08224) 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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### Anti-NDUF1 Antibody

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