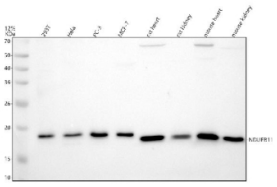
# NDUFB11 Antibody / NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 11 (FY12865)

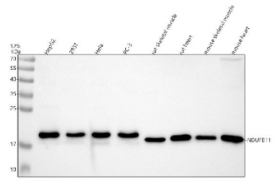
| Catalog No. | Formulation | Size |
|---|---|---|
| FY12865 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

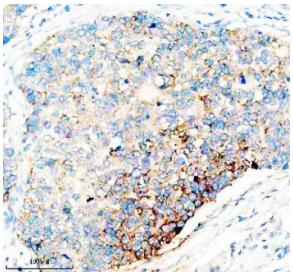
| | |
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q9NX14 |
| **Localization** | Cytoplasm (Mitochondria) |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunohistochemistry : 2-5ug/ml<br>Immunocytochemistry/Immunofluorescence : 5ug/ml |
| **Limitations** | This NDUFB11 antibody is available for research use only. |



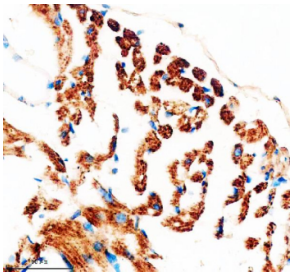
Western blot analysis of NDUFB11 using anti-NDUFB11 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human 293T whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human MCF-7 whole cell lysates, Lane 5: rat heart tissue lysates, Lane 6: rat kidney tissue lysates, Lane 7: mouse heart tissue lysates, Lane 8: mouse kidney 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-NDUFB11 antibody at 0.5 ug/ml overnight at 4oC, 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 was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of NDUFB11 is ~17 kDa.



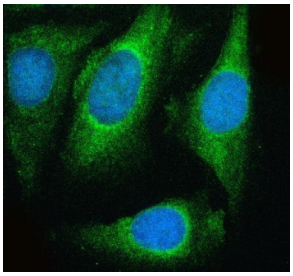
Western blot analysis of NDUFB11 using anti-NDUFB11 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HepG2 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human PC-3 whole cell lysates, Lane 5: rat skeletal muscle tissue lysates, Lane 6: rat heart tissue lysates, Lane 7: mouse skeletal muscle 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-NDUFB11 antibody at 1:1000 overnight at 4oC, 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 was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of NDUFB11 is ~18 kDa.



Immunohistochemical staining of NDUFB11 using anti-NDUFB11 antibody. NDUFB11 was detected in a paraffin-embedded section of human lung 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-NDUFB11 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunohistochemical staining of NDUFB11 using anti-NDUFB11 antibody. NDUFB11 was detected in a paraffin-embedded section of mouse heart 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-NDUFB11 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunofluorescent staining of NDUFB11 using anti-NDUFB11 antibody (green). NDUFB11 was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-NDUFB11 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.

## Description

NDUFB11 antibody detects NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 11, a small integral membrane protein of the mitochondrial inner membrane essential for oxidative phosphorylation. Encoded by the NDUFB11 gene on chromosome Xp11.23, this protein is a subunit of mitochondrial Complex I (NADH:ubiquinone oxidoreductase), the first and largest enzyme complex of the electron transport chain. NDUFB11 contributes to electron transfer from NADH to ubiquinone, driving proton pumping and ATP synthesis. Its stability is vital for the assembly and structural integrity of Complex I, which contains over 40 subunits in mammalian cells.

Structurally, NDUFB11 is a highly conserved, hydrophobic protein of approximately 17 kilodaltons, localized to the mitochondrial inner membrane with one transmembrane helix. It anchors and stabilizes neighboring subunits within the peripheral arm of Complex I, enabling efficient electron flow and coupling of redox reactions to proton translocation. Loss or mutation of NDUFB11 disrupts complex assembly, leading to impaired respiratory chain activity and reduced ATP

generation.

The NDUFB11 antibody is widely used in mitochondrial biology, metabolic disease, and bioenergetics research to study oxidative phosphorylation and Complex I organization. Western blot analysis detects a 17 kilodalton band corresponding to NDUFB11, while immunofluorescence reveals characteristic mitochondrial localization that colocalizes with markers such as COX IV. This antibody provides a reliable means of evaluating mitochondrial function, biogenesis, and assembly defects in various models.

Pathogenic variants in NDUFB11 cause X-linked mitochondrial Complex I deficiency, often presenting as hypertrophic cardiomyopathy, encephalopathy, or lactic acidosis. Altered NDUFB11 expression has also been observed in cancers and neurodegenerative disorders, where mitochondrial dysfunction contributes to disease progression. The NDUFB11 antibody enables detection of expression changes, assessment of mitochondrial health, and verification of respiratory chain assembly status. NSJ Bioreagents validates this antibody for its applications, ensuring high specificity and reproducibility for mitochondrial research.

## Application Notes

Optimal dilution of the NDUFB11 antibody should be determined by the researcher.

## Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human NDUFB11 was used as the immunogen for the NDUFB11 antibody.

## Storage

After reconstitution, the NDUFB11 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.