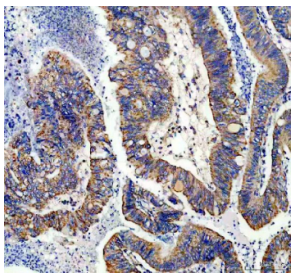
NDUFS1 Antibody (RQ8938)

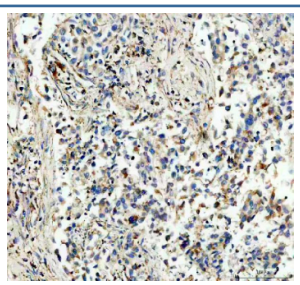
Catalog No.	Formulation	Size
RQ8938	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

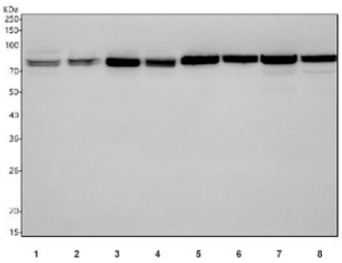
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
UniProt	P28331
Localization	Cytoplasm
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This NDUFS1 antibody is available for research use only.



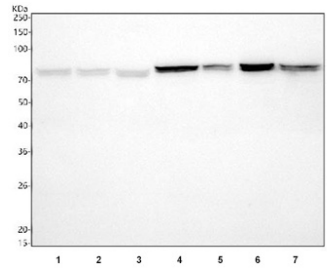
IHC staining of FFPE human colon cancer tissue with NDUFS1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



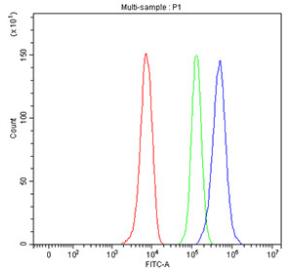
IHC staining of FFPE human lung cancer tissue with NDUFS1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human HeLa, 2) human 293T, 3) human A549, 4) human HepG2, 5) rat kidney, 6) rat liver, 7) mouse kidney and 8) mouse liver tissue lysate with NDUFS1 antibody. Predicted molecular weight: 68-81 kDa (multiple isoforms).



Western blot testing of 1) human 293T, 2) human A549, 3) human HepG2, 4) rat kidney, 5) rat liver, 6) mouse kidney and 7) mouse liver tissue lysate with NDUFS1 antibody. Predicted molecular weight: 68-81 kDa (multiple isoforms).



Flow cytometry testing of fixed and permeabilized human HepG2 cells with NDUFS1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= NDUFS1 antibody.

Description

NDUFS1 (NADH:ubiquinone oxidoreductase core subunit S1) is a vital component of mitochondrial complex I, the largest enzyme of the respiratory chain. This nuclear-encoded protein serves as a core subunit of the iron-sulfur protein (ISP) fraction, where it plays an essential role in electron transfer from NADH to ubiquinone. By facilitating the first step in oxidative phosphorylation, NDUFS1 directly contributes to ATP production, making it crucial for cellular energy metabolism. Research utilizing an NDUFS1 antibody has highlighted the importance of this protein in maintaining mitochondrial integrity and function.

Mutations in the NDUFS1 gene are associated with mitochondrial complex I deficiencies, a leading cause of numerous mitochondrial disorders. These conditions often present with neurodegenerative features, metabolic dysfunction, and progressive encephalopathy. Studies employing an NDUFS1 antibody have provided valuable insights into how loss of function impacts respiratory chain activity and contributes to disease pathology.

Beyond inherited disorders, dysregulation of NDUFS1 has been implicated in aging, neurodegenerative diseases such as Parkinson's, and ischemic injury. Because mitochondrial dysfunction is a common hallmark of these conditions, NDUFS1 remains an attractive marker for evaluating mitochondrial activity in research models. Use of an NDUFS1 antibody allows for detailed detection in techniques including western blot, immunohistochemistry, and immunofluorescence.

NSJ Bioreagents provides high-quality NDUFS1 antibody reagents for worldwide researchers investigating mitochondrial biology. These reagents enable the exploration of NDUFS1's role in energy production, cellular stress responses, and disease progression.

Application Notes

Optimal dilution of the NDUFS1 antibody should be determined by the researcher.

Immunogen

Amino acids E44-C727 from the human protein were used as the immunogen for the NDUFS1 antibody.

Storage

After reconstitution, the NDUFS1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.