

NDUFB3 (F-12): sc-393351

BACKGROUND

Complex 1 (also known as NADH dehydrogenase) of the electron transport chain (respiratory chain) is an enzymatic complex that catalyzes the transfer of electrons from NADH to ubiquinone. Free energy from the reaction is conserved in the transfer of protons into the intermembrane space to create an electrochemical proton gradient, a driving force for ATP synthesis. Complex 1 is a complicated, multi-protein, L-shaped complex composed of at least 45 different subunits and located in the mitochondrial inner membrane. NDUFB3 (NADH dehydrogenase (ubiquinone) 1 β subcomplex subunit 3), also known as B12, is a 98 amino acid hydrophobic protein belonging to the Complex I NDUFB3 subunit family. Ubiquitously expressed, NDUFB3 localizes to the matrix side of the inner membrane of the mitochondrion and functions as an accessory subunit of Complex I.

CHROMOSOMAL LOCATION

Genetic locus: NDUFB3 (human) mapping to 2q33.1; Ndufb3 (mouse) mapping to 1 C1.3.

SOURCE

NDUFB3 (F-12) is a mouse monoclonal antibody raised against amino acids 1-98 representing full length NDUFB3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NDUFB3 (F-12) is available conjugated to agarose (sc-393351 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393351 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393351 PE), fluorescein (sc-393351 FITC), Alexa Fluor® 488 (sc-393351 AF488), Alexa Fluor® 546 (sc-393351 AF546), Alexa Fluor® 594 (sc-393351 AF594) or Alexa Fluor® 647 (sc-393351 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393351 AF680) or Alexa Fluor® 790 (sc-393351 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NDUFB3 (F-12) is recommended for detection of NDUFB3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NDUFB3 siRNA (h): sc-94549, NDUFB3 siRNA (m): sc-149880, NDUFB3 shRNA Plasmid (h): sc-94549-SH, NDUFB3 shRNA Plasmid (m): sc-149880-SH, NDUFB3 shRNA (h) Lentiviral Particles: sc-94549-V and NDUFB3 shRNA (m) Lentiviral Particles: sc-149880-V.

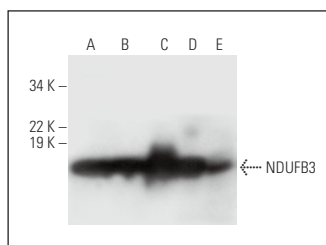
Molecular Weight of NDUFB3: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or human heart extract: sc-363763.

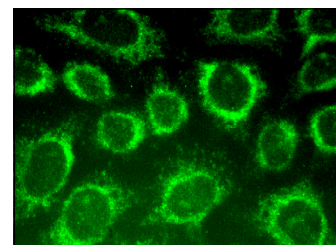
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NDUFB3 (F-12): sc-393351. Western blot analysis of NDUFB3 expression in HeLa (A) and A-431 (B) whole cell lysates and human heart (C), mouse lung (D) and human lung (E) tissue extracts.



NDUFB3 (F-12): sc-393351. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Chung, I.C., et al. 2020. Mitochondrial oxidative phosphorylation complex regulates NLRP3 inflammasome activation and predicts patient survival in nasopharyngeal carcinoma. *Mol. Cell. Proteomics* 19: 142-154.
2. Zhu, J., et al. 2022. Clinical relevance and tumor growth suppression of mitochondrial ROS regulators along NADH:ubiquinone oxidoreductase subunit B3 in thyroid cancer. *Oxid. Med. Cell. Longev.* 2022: 8038857.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.