SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFB7 (F-8): sc-365552

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. NDUB7 (NADH dehydrogenase [ubiquinone] 1β subcomplex subunit 7), also known as NADH-ubiquinone oxioreductase B18 subunit, complex I-B18 (CI-B18) or cell adhesion protein SQM1, is a 137 amino acid accessory subunit of complex 1. Ubiquitously expressed, NDUFB7 localizes to the mitochondrial inner membrane on the matrix side. NDUFB7 contains a sevenfold repeat of positively-charged residues that may indicate a role in protein-protein interactions.

REFERENCES

1. Wong, Y.C., et al. 1990. cDNA cloning of a novel cell adhesion protein expressed in human squamous carcinoma cells. Biochem. Biophys. Res. Commun. 166: 984-992.
2. Loeffen, J.L., et al. 1998. cDNA of eight nuclear encoded subunits of NADH: ubiquinone oxidoreductase: human complex I cDNA characterization completed. Biochem. Biophys. Res. Commun. 253: 415-422.
3. Emahazion, T., et al. 1998. Intron based radiation hybrid mapping of 15 complex I genes of the human electron transport chain. Cytogenet. Cell Genet. 82: 115-119.
4. Smeitink, J. and van den Heuvel, L. 1999. Human mitochondrial complex I in health and disease. Am. J. Hum. Genet. 64: 1505-1510.
5. Triepels, R., et al. 2000. Characterization of the human complex I NDUFB7 and 17.2-kDa cDNAs and mutational analysis of 19 genes of the HP fraction in complex I-deficient-patients. Hum. Genet. 106: 385-391.

CHROMOSOMAL LOCATION

Genetic locus: NDUFB7 (human) mapping to 19p13.12; Ndufb7 (mouse) mapping to 8 C2.

SOURCE

NDUFB7 (F-8) is a mouse monoclonal antibody raised against amino acids 1-137 representing full length NDUFB7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NDUFB7 (F-8) is available conjugated to agarose (sc-365552 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365552 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365552 PE), fluorescein (sc-365552 FITC), Alexa Fluor® 488 (sc-365552 AF488), Alexa Fluor® 546 (sc-365552 AF546), Alexa Fluor® 594 (sc-365552 AF594) or Alexa Fluor® 647 (sc-365552 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365552 AF680) or Alexa Fluor® 790 (sc-365552 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NDUFB7 (F-8) is recommended for detection of NDUFB7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 NDUFB7 siRNA (h): sc-97267, NDUFB7 siRNA (m): sc-149884, NDUFB7 shRNA Plasmid (h): sc-97267-SH, NDUFB7 shRNA Plasmid (m): sc-149884-SH, NDUFB7 shRNA (h) Lentiviral Particles: sc-97267-V and NDUFB7 shRNA (m) Lentiviral Particles: sc-149884-V.

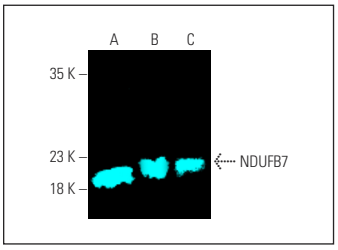
Molecular Weight of NDUFB7: 16 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

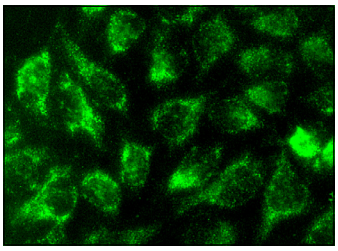
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



NDUFB7 (F-8): sc-365552. Fluorescent western blot analysis of NDUFB7 expression in A-431 (**A**), K-562 (**B**) and PC-3 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 647: sc-533664.



NDUFB7 (F-8): sc-365552. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.