SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFA8 (C-6): sc-398097

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NDUFA8 (NDUFA8 NADH dehydrogenase (ubiquinone) 1 α subcomplex, 8), also known as complex I-PGIV (CI-PGIV) or PGIV, is a 172 amino acid mitochondrial protein belonging to the complex I NDUFA8 subunit family. Existing as a subunit of the multi-protein membrane respiratory chain NADH dehydrogenase complex (complex I), NDUFA8 functions as an accessory protein that facilitates the transfer of electrons from NADH to the respiratory chain. NDUFA8 is most highly expressed in heart and skeletal muscle and contains two CHCH domains. The gene encoding NDUFA8 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9.

REFERENCES

1. 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.
2. Smeitink, J., et al. 1998. Molecular characterization and mutational analysis of the human B17 subunit of the mitochondrial respiratory chain complex I. Hum. Genet. 103: 245-250.
3. Triepels, R., et al. 1998. The nuclear-encoded human NADH:ubiquinone oxido-reductase NDUFA8 subunit: cDNA cloning, chromosomal localization, tissue distribution, and mutation detection in complex-I-deficient patients. Hum. Genet. 103: 557-563.
4. Smeitink, J. and van den Heuvel, L. 1999. Human mitochondrial complex I in health and disease. Am. J. Hum. Genet. 64: 1505-1510.

CHROMOSOMAL LOCATION

Genetic locus: NDUFA8 (human) mapping to 9q33.2; Ndufa8 (mouse) mapping to 2 B.

SOURCE

NDUFA8 (C-6) is a mouse monoclonal antibody raised against amino acids 1-172 representing full length NDUFA8 of human origin.

PRODUCT

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

NDUFA8 (C-6) is available conjugated to agarose (sc-398097 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398097 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398097 PE), fluorescein (sc-398097 FITC), Alexa Fluor® 488 (sc-398097 AF488), Alexa Fluor® 546 (sc-398097 AF546), Alexa Fluor® 594 (sc-398097 AF594) or Alexa Fluor® 647 (sc-398097 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398097 AF680) or Alexa Fluor® 790 (sc-398097 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

NDUFA8 (C-6) is recommended for detection of NDUFA8 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 NDUFA8 siRNA (h): sc-92963, NDUFA8 siRNA (m): sc-149875, NDUFA8 shRNA Plasmid (h): sc-92963-SH, NDUFA8 shRNA Plasmid (m): sc-149875-SH, NDUFA8 shRNA (h) Lentiviral Particles: sc-92963-V and NDUFA8 shRNA (m) Lentiviral Particles: sc-149875-V.

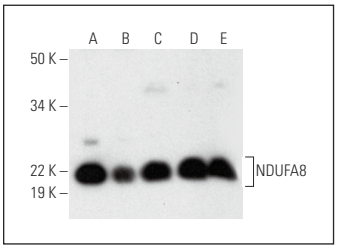
Molecular Weight of NDUFA8: 20 kDa.

Positive Controls: human heart extract: sc-363763, human skeletal muscle extract: sc-363776 or MCF7 whole cell lysate: sc-2206.

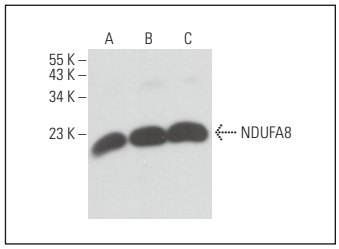
RECOMMENDED SUPPORT REAGENTS

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



NDUFA8 (C-6): sc-398097. Western blot analysis of NDUFA8 expression in human heart (**A**) and human skeletal muscle (**B**) tissue extracts and MCF7 (**C**), Hep G2 (**D**) and Jurkat (**E**) whole cell lysates.



NDUFA8 (C-6): sc-398097. Western blot analysis of NDUFA8 expression in MCF7 (**A**), SJRH30 (**B**) and Caki-1 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, T., et al. 2021. C9orf72 regulates energy homeostasis by stabilizing mitochondrial complex I assembly. Cell Metab. 33: 531-546.e9.

RESEARCH USE

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