

NDUFS8 (V-15): sc-243594

BACKGROUND

Located in the mitochondrial inner membrane, mitochondrial complex I is the first and largest enzyme in the electron transport chain of oxidative phosphorylation. By oxidizing NADH that is produced during the Krebs cycle, this complex utilizes two electrons to reduce ubiquinone to ubiquinol, thereby initiating the passage of electrons to successive complexes and ultimately leading to the reduction of oxygen to water. Mitochondrial complex I consists of over 40 subunits and is of considerable clinical interest since defects in any of the subunits can lead to various myopathies and neuropathies. As a subunit of mitochondrial complex I, NDUFS8 (NADH dehydrogenase [ubiquinone] iron-sulfur protein 8), also known as TYKY, CI-23k, CI23KD or NADH-ubiquinone oxidoreductase 23 kDa subunit, is a 210 amino acid protein that is suggested to be required for catalytic activity. Defects in the gene encoding NDUFS8 are the cause of Leigh syndrome, a severe neurological disorder that is characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions.

REFERENCES

1. Hyslop, S.J., et al. 1996. Assignment of the PSST subunit gene of human mitochondrial complex I to chromosome 19p13. *Genomics* 37: 375-380.
2. Procaccio, V., et al. 1997. cDNA sequence and chromosomal localization of the NDUFS8 human gene coding for the 23 kDa subunit of the mitochondrial complex I. *Biochim. Biophys. Acta* 1351: 37-41.
3. Loeffen, J., et al. 1998. The first nuclear-encoded complex I mutation in a patient with Leigh syndrome. *Am. J. Hum. Genet.* 63: 1598-1608.
4. de Sury, R., et al. 1998. Genomic structure of the human NDUFS8 gene coding for the iron-sulfur TYKY subunit of the mitochondrial NADH:ubiquinone oxidoreductase. *Gene* 215: 1-10.
5. Triepels, R., et al. 1998. The nuclear-encoded human NADH:ubiquinone oxidoreductase NDUF8 subunit: cDNA cloning, chromosomal localization, tissue distribution, and mutation detection in complex-I-deficient patients. *Hum. Genet.* 103: 557-563.

CHROMOSOMAL LOCATION

Genetic locus: NDUFS8 (human) mapping to 11q13.2; Ndufs8 (mouse) mapping to 19 A.

SOURCE

NDUFS8 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDUFS8 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243594 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

NDUFS8 (V-15) is recommended for detection of NDUFS8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

NDUFS8 (V-15) is also recommended for detection of NDUFS8 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NDUFS8 siRNA (h): sc-96551, NDUFS8 siRNA (m): sc-149890, NDUFS8 shRNA Plasmid (h): sc-96551-SH, NDUFS8 shRNA Plasmid (m): sc-149890-SH, NDUFS8 shRNA (h) Lentiviral Particles: sc-96551-V and NDUFS8 shRNA (m) Lentiviral Particles: sc-149890-V.

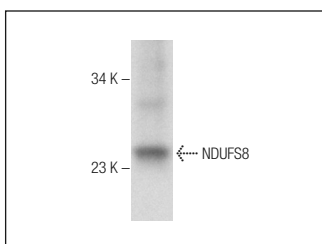
Molecular Weight of NDUFS8: 23 kDa.

Positive Controls: mouse heart extract: sc-2254.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NDUFS8 (V-15): sc-243594. Western blot analysis of NDUFS8 expression in mouse heart tissue extract.

RESEARCH USE

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

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Try **NDUFS8 (A-6): sc-515527** or **NDUFS8 (D-5): sc-515537**, our highly recommended monoclonal alternatives to NDUFS8 (V-15).