SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFS5 (M-12): sc-104447

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 in the Krebs cycle, this complex utilizes the 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, NDUFS5 (NADH dehydrogenase [ubiquinone] iron-sulfur protein 5), also designated NADH-ubiquinone oxidoreductase 15 kDa subunit, is a 106 amino acid protein that is suggested to not be involved in catalysis. NDUFS5 is expressed ubiquitously in human tissues, with a relative higher expression in human heart, skeletal muscle, liver, kidney and fetal heart.

REFERENCES

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6. Visch, H.J., et al. 2004. Inhibition of mitochondrial Na^+-Ca^{2+} exchange restores agonist-induced ATP production and Ca^{2+} handling in human complex I deficiency. J. Biol. Chem. 279: 40328-40336.
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8. Scacco, S., et al. 2006. Mutations in structural genes of complex I associated with neurological diseases. Ital. J. Biochem. 55: 254-262.
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STORAGE

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

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Ndufs5 (mouse) mapping to 4 D2.2.

SOURCE

NDUFS5 (M-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NDUFS5 of mouse 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-104447 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDUFS5 (M-12) is recommended for detection of NDUFS5 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 NDUFS5 siRNA (m): sc-106291, NDUFS5 shRNA Plasmid (m): sc-106291-SH and NDUFS5 shRNA (m) Lentiviral Particles: sc-106291-V.

Molecular Weight of NDUFS5: 13 kDa.

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) 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.

RESEARCH USE

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