

# NDUFA5 (C-14): sc-104429

## BACKGROUND

NDUFA5 (NADH-ubiquinone oxidoreductase a subunit 5), also designated Complex I-13kD-B, is one of 45 subunits comprising complex I of the oxidative phosphorylation electron transport chain. The multi-subunit NADH: ubiquinone oxidoreductase (complex I) is the first enzyme complex in the electron transport chain of the mitochondria. Complex I deficiency is the most common respiratory chain defect, resulting in various combinations of cardiac, hepatic, and renal disorders. Through use of chaotropic agents, complex I can be separated into three different fractions: a flavoprotein fraction, a hydrophobic protein (HP) fraction and an iron-sulfur protein (IP) fraction. NDUFA5 is a 116 amino acid protein that is ubiquitously expressed with highest levels in heart, skeletal muscle and brain.

## REFERENCES

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6. Martin, M.A., et al. 2005. Leigh syndrome associated with mitochondrial complex I deficiency due to a novel mutation in the NDUFS1 gene. *Arch. Neurol.* 62: 659-661.
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8. Sparks, L.M., et al. 2005. A high-fat diet coordinately downregulates genes required for mitochondrial oxidative phosphorylation in skeletal muscle. *Diabetes* 54: 1926-1933.
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## CHROMOSOMAL LOCATION

Genetic locus: NDUFA5 (human) mapping to 7q31.32; Ndufa5 (mouse) mapping to 6 A3.1.

## SOURCE

NDUFA5 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NDUFA5 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-104429 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NDUFA5 (C-14) is recommended for detection of NDUFA5 of mouse, rat and human 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); non cross-reactive with other NDUFA family members.

NDUFA5 (C-14) is also recommended for detection of NDUFA5 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for NDUFA5 siRNA (h): sc-89625, NDUFA5 siRNA (m): sc-149872, NDUFA5 shRNA Plasmid (h): sc-89625-SH, NDUFA5 shRNA Plasmid (m): sc-149872-SH, NDUFA5 shRNA (h) Lentiviral Particles: sc-89625-V and NDUFA5 shRNA (m) Lentiviral Particles: sc-149872-V.

Molecular Weight of NDUFA5: 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **NDUFA5 (A-3): sc-393273** or **NDUFA5 (E-5): sc-393798**, our highly recommended monoclonal alternatives to NDUFA5 (C-14).