

# NDUFS1 (H-300): sc-99232

## BACKGROUND

The multisubunit NADH:ubiquinone oxidoreductase (complex I) is the first enzyme complex in the electron transport chain of mitochondria. Through use of chaotropic agents, complex I can be separated into three different fractions: a flavoprotein fraction, an iron-sulfur protein (IP) fraction and a hydrophobic protein (HP) fraction. The IP fraction contains NDUFS1-7. NDUFS1, a 75 kDa protein, is the largest subunit of complex I and is thought to be the first of the FeS proteins to accept electrons from an NADH-flavoprotein reductase within the complex. NDUFS1 may even form part of the active site crevice where NADH is oxidized. NDUFS1 is also a critical caspase substrate in mitochondria, and caspase cleavage of NDUFS1 is required for several mitochondrial changes associated with apoptosis.

## REFERENCES

1. Chow, W., et al. 1991. Determination of the cDNA sequence for the human mitochondrial 75 kDa FeS protein of NADH-coenzyme Q reductase. *Eur. J. Biochem.* 201: 547-550.
2. Duncan, A.M., et al. 1992. Localization of the human 75 kDa FeS protein of NADH-coenzyme Q reductase gene (NDUFS1) to 2q33-q34. *Cytogenet. Cell Genet.* 60: 212-213.

## CHROMOSOMAL LOCATION

Genetic locus: NDUFS1 (human) mapping to 2q33.3; Ndufs1 (mouse) mapping to 1 C2.

## SOURCE

NDUFS1 (H-300) is a rabbit polyclonal antibody raised against amino acids 428-727 mapping at the C-terminus of NDUFS1 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.

## APPLICATIONS

NDUFS1 (H-300) is recommended for detection of NDUFS1 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).

NDUFS1 (H-300) is also recommended for detection of NDUFS1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NDUFS1 siRNA (h): sc-61164, NDUFS1 siRNA (m): sc-61165, NDUFS1 shRNA Plasmid (h): sc-61164-SH, NDUFS1 shRNA Plasmid (m): sc-61165-SH, NDUFS1 shRNA (h) Lentiviral Particles: sc-61164-V and NDUFS1 shRNA (m) Lentiviral Particles: sc-61165-V.

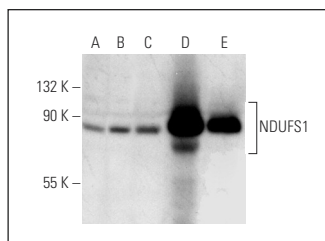
Molecular Weight of NDUFS1: 75 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or human kidney extract: sc-363764.

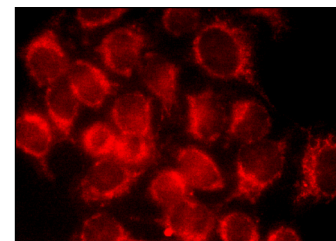
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



NDUFS1 (H-300): sc-99232. Western blot analysis of NDUFS1 expression in HeLa (A), Raji (B) and Hep G2 (C) whole cell lysates and mouse heart (D) and mouse brain (E) tissue extracts.



NDUFS1 (H-300): sc-99232. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Garcia-Ruiz, I., et al. 2013. Pioglitazone leads to an inactivation and disassembly of complex I of the mitochondrial respiratory chain. *BMC Biol.* 11: 88.
2. Li, K., et al. 2015. Glutamine reduces the apoptosis of H9C2 cells treated with high-glucose and reperfusion through an oxidation-related mechanism. *PLoS ONE.* 10: e0132402.

## 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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Satisfaction  
Guaranteed

Try **NDUFS1 (E-8): sc-271510** or **NDUFS1 (G-6): sc-271387**, our highly recommended monoclonal alternatives to NDUFS1 (H-300).