

# NDUFAB1 (S-13): sc-109334

## BACKGROUND

NDUFAB1 (NADH dehydrogenase (ubiquinone) 1,  $\alpha/\beta$  subcomplex, 1), also known as SDAP, ACP (acyl carrier protein) or FASN2A, is one of about 45 subunits comprising complex I of the oxidative phosphorylation electron transport chain. Consisting of 156 amino acids and localizing to mitochondria, NDUFAB1 functions as an accessory subunit of the multi-protein mitochondrial membrane respiratory chain NADH dehydrogenase complex (known as complex I). Complex I plays an important role in the transfer of electrons from NADH to the respiratory chain, a process that is essential for cellular respiration. NDUFAB1 contains one acyl carrier domain and is encoded by a gene that maps to human chromosome 16p12.21 and mouse chromosome 7 F3.

## REFERENCES

- Runswick, M.J., Fearnley, I.M., Skehel, J.M. and Walker, J.E. 1991. Presence of an acyl carrier protein in NADH:ubiquinone oxidoreductase from bovine heart mitochondria. *FEBS Lett.* 286: 121-124.
- Loeffen, J.L., Triepels, R.H., van den Heuvel, L.P., Schuelke, M., Buskens, C.A., Smeets, R.J., Trijbels, J.M. and Smeitink, J.A. 1998. cDNA of eight nuclear encoded subunits of NADH:ubiquinone oxidoreductase: human complex I cDNA characterization completed. *Biochem. Biophys. Res. Commun.* 253: 415-422.
- Emahazion, T., Beskow, A., Gyllensten, U. and Brookes, A.J. 1998. Intron based radiation hybrid mapping of 15 complex I genes of the human electron transport chain. *Cytogenet. Cell Genet.* 82: 115-119.
- Smeitink, J. and van den Heuvel, L. 1999. Human mitochondrial complex I in health and disease. *Am. J. Hum. Genet.* 64: 1505-1510.
- Triepels, R., Smeitink, J., Loeffen, J., Smeets, R., Buskens, C., Trijbels, F. and van den Heuvel, L. 1999. The human nuclear-encoded acyl carrier subunit (NDUFAB1) of the mitochondrial complex I in human pathology. *J. Inherit. Metab. Dis.* 22: 163-173.
- Zhang, L., Joshi, A.K. and Smith, S. 2003. Cloning, expression, characterization, and interaction of two components of a human mitochondrial fatty acid synthase. Malonyltransferase and acyl carrier protein. *J. Biol. Chem.* 278: 40067-40074.
- Zhang, X., Azhar, G., Helms, S., Zhong, Y. and Wei, J.Y. 2008. Identification of a subunit of NADH-dehydrogenase as a p49/STRAP-binding protein. *BMC Cell Biol.* 9: 8.

## CHROMOSOMAL LOCATION

Genetic locus: NDUFAB1 (human) mapping to 16p12.1.

## SOURCE

NDUFAB1 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDUFAB1 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109334 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NDUFAB1 (S-13) is recommended for detection of NDUFAB1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 NDUFAB1 siRNA (h): sc-93536, NDUFAB1 shRNA Plasmid (h): sc-93536-SH and NDUFAB1 shRNA (h) Lentiviral Particles: sc-93536-V.

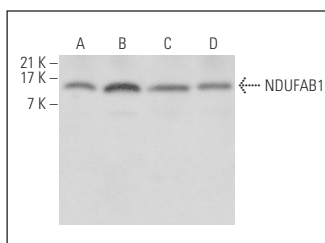
Molecular Weight of NDUFAB1: 17 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

## 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



NDUFAB1 (S-13): sc-109334. Western blot analysis of NDUFAB1 expression in Caki-1 (A), HEK293 (B), MDA-MB-435S (C) and HeLa (D) whole cell lysates.

## 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.