

NDUFA3 (T-12): sc-131198

BACKGROUND

NDUFA3 (NADH dehydrogenase (ubiquinone) 1 α subcomplex, 3), also known as B9, is one of about 45 subunits comprising complex I of the oxidative phosphorylation electron transport chain. Consisting of 84 amino acids and belonging to the complex I NDUFA3 subunit family, NDUFA3 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. The gene encoding NDUFA3 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

1. Olsen, A., et al. 1994. Gene organization of the pregnancy-specific glycoprotein region on human chromosome 19: assembly and analysis of a 700-kb cosmid contig spanning the region. *Genomics* 23: 659-668.
2. Teglund, S., et al. 1994. The pregnancy-specific glycoprotein (PSG) gene cluster on human chromosome 19: fine structure of the 11 PSG genes and identification of 6 new genes forming a third subgroup within the carcino-embryonic antigen (CEA) family. *Genomics* 23: 669-684.
3. Loeffen, J.L., et al. 1998. cDNA of eight nuclear encoded subunits of NADH: ubiquinone oxidoreductase: human complex I cDNA characterization completed. *Biochem. Biophys. Res. Commun.* 253: 415-422.
4. Online Mendelian Inheritance in Man, OMIM[™]. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603832. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Wang, L., et al. 2000. C-CAM1, a candidate tumor suppressor gene, is abnormally expressed in primary lung cancers. *Clin. Cancer Res.* 6: 2988-2993.

CHROMOSOMAL LOCATION

Genetic locus: NDUFA3 (human) mapping to 19q13.42; Ndufa3 (mouse) mapping to 7 A1.

SOURCE

NDUFA3 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDUFA3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131198 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDUFA3 (T-12) is recommended for detection of NDUFA3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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); non cross-reactive with other NDUFA family members.

NDUFA3 (T-12) is also recommended for detection of NDUFA3 in additional species, including canine.

Suitable for use as control antibody for NDUFA3 siRNA (h): sc-97393, NDUFA3 siRNA (m): sc-149871, NDUFA3 shRNA Plasmid (h): sc-97393-SH, NDUFA3 shRNA Plasmid (m): sc-149871-SH, NDUFA3 shRNA (h) Lentiviral Particles: sc-97393-V and NDUFA3 shRNA (m) Lentiviral Particles: sc-149871-V.

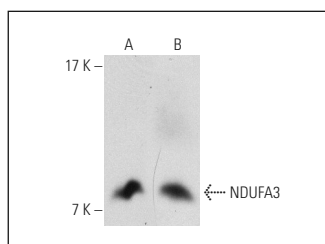
Molecular Weight of NDUFA3: 9 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat skeletal muscle extract: sc-364810.

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



NDUFA3 (T-12): sc-131198. Western blot analysis of NDUFA3 expression in rat skeletal muscle (A) and mouse heart (B) tissue extracts.

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.