

NDUFB8 (20E9): sc-65237

BACKGROUND

NDUFB8 (NADH dehydrogenase (ubiquinone) 1 β subcomplex, 8), also known as ASH1 or CI-ASH1, is a 186 amino acid single-pass membrane protein. Localized to the matrix side of the inner mitochondrial membrane, NDUFB8 functions as an accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase 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 NDUFB8 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Several protein-coding genes, including those that encode for chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. Ton, C., et al. 1997. Identification and primary structure of five human NADH-ubiquinone oxidoreductase subunits. *Biochem. Biophys. Res. Commun.* 241: 589-594.
2. 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.
3. Smeitink, J., et al. 1998. Molecular characterization and mutational analysis of the human B17 subunit of the mitochondrial respiratory chain complex I. *Hum. Genet.* 103: 245-250.
4. Conn, K.J., et al. 2001. Decreased expression of the NADH:ubiquinone oxidoreductase (complex I) subunit 4 in 1-methyl-4-phenylpyridinium-treated human neuroblastoma SH-SY5Y cells. *Neurosci. Lett.* 306: 145-148.
5. Kim, S.H., et al. 2001. The reduction of NADH ubiquinone oxidoreductase 24 and 75 kDa subunits in brains of patients with Down syndrome and Alzheimer's disease. *Life Sci.* 68: 2741-2750.

CHROMOSOMAL LOCATION

Genetic locus: NDUFB8 (human) mapping to 10q24.31; Ndufb8 (mouse) mapping to 19 C3.

SOURCE

NDUFB8 (20E9) is a mouse monoclonal antibody raised against NDUFB8 of bovine origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

NDUFB8 (20E9) is recommended for detection of NDUFB8 of mouse, human and bovine 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NDUFB8 siRNA (h): sc-90752, NDUFB8 siRNA (m): sc-149885, NDUFB8 shRNA Plasmid (h): sc-90752-SH, NDUFB8 shRNA Plasmid (m): sc-149885-SH, NDUFB8 shRNA (h) Lentiviral Particles: sc-90752-V and NDUFB8 shRNA (m) Lentiviral Particles: sc-149885-V.

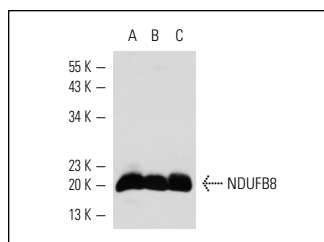
Molecular Weight of NDUFB8: 22 kDa.

Positive Controls: Human heart tissue extract, mouse heart extract: sc-2254 or mouse brain extract: sc-2253.

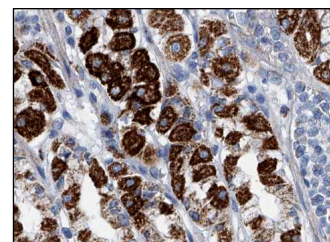
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



NDUFB8 (20E9): sc-65237. Western blot analysis of NDUFB8 expression in human heart (A), mouse heart (B) and mouse brain (C) tissue extracts.



NDUFB8 (20E9): sc-65237. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

RESEARCH USE

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

PROTOCOLS

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