# SANTA CRUZ BIOTECHNOLOGY, INC.

# NDUFB9 (N-12): sc-98031



#### BACKGROUND

NDUFB9 (NADH dehydrogenase (ubiquinone) 1  $\beta$  subcomplex, 9), also known as LYRM3 or B22, is a 179 amino acid protein that belongs to the complex I LYR family. Localized to the inner mitochondrial membrane, as well as to the matrix side of the peripheral membrane, NDUFB9 functions as an accessory subunit of the multi-subunit 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 NDUFB9 maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

### REFERENCES

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- 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.
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- Smeitink, J. and van den Heuvel, L. 1999. Human mitochondrial complex I in health and disease. Am. J. Hum. Genet. 64: 1505-1510.
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#### CHROMOSOMAL LOCATION

Genetic locus: NDUFB9 (human) mapping to 8q24.13; Ndufb9 (mouse) mapping to 15 D1.

#### SOURCE

NDUFB9 (N-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of NDUFB9 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 100  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-98031 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

NDUFB9 (N-12) is recommended for detection of NDUFB9 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 NDUFB4 or NDUFB5.

NDUFB9 (N-12) is also recommended for detection of NDUFB9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NDUFB9 siRNA (h): sc-77614, NDUFB9 siRNA (m): sc-149886, NDUFB9 shRNA Plasmid (h): sc-77614-SH, NDUFB9 shRNA Plasmid (m): sc-149886-SH, NDUFB9 shRNA (h) Lentiviral Particles: sc-77614-V and NDUFB9 shRNA (m) Lentiviral Particles: sc-149886-V.

Molecular Weight of NDUFB9: 22 kDa.

Positive Controls: Ramos cell lysate: sc-2216.

#### **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) Immunofluo-rescence: 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.

#### **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.

# MONOS Satisfation Guaranteed

Try **NDUFB9 (D-7): sc-398869**, our highly recommended monoclonal alternative to NDUFB9 (N-12).