**BACKGROUND**

NADH:ubiquinone oxidoreductase (complex I) is an extremely complicated multiprotein complex located in the inner mitochondrial membrane. Human complex I is important for energy metabolism because its main function is to transport electrons from NADH to ubiquinone, which is accompanied by translocation of protons from the mitochondrial matrix to the intermembrane space. Human complex I appears to consist of 41 subunits. A small number of complex I subunits are the products of mitochondrial genes (subunits 1-7), while the remainder are nuclear encoded and imported from the cytoplasm. NADH dehydrogenase subunit 1 (ND1) binds rotenone and rotenone analogs and might be involved in electron transfer to ubiquinone. Mutations in the ND1 gene may be implicated in several disorders, including Leber hereditary optic neuropathy, Alzheimer disease, and Parkinson disease.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ND1 (human) mapping to MT.

**SOURCE**

ND1 (3H3) is a mouse monoclonal antibody raised against amino acids 21-71 of ND1 of human origin.

**PRODUCT**

Each vial contains 100 µg IgGκ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

ND1 (3H3) is recommended for detection of ND1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of ND1: 36 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

**DATA**

**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 for detailed protocols and support products.