SANTA CRUZ BIOTECHNOLOGY, INC.

NDOR1 (XX-9): sc-100482

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NDOR1 (NADPH dependent diflavin oxidoreductase 1), also known as NR1 (novel reductase 1), is a 597 amino acid cytoplasmic protein that contains one FAD-binding domain and one flavodoxin-like domain. Expressed at low levels in heart, brain, kidney, pancreas, prostate and skeletal muscle and at particularly high levels in placenta, NDOR1 functions as an oxidoreductase that uses FAD and FMN as cofactors to catalyze the NADP-dependent reduction of one-electron acceptors, such as cytochrome c, menadione and potassium ferricyanide. NDOR1 is present in a variety of cancer cell lines, including lung carcinoma, melanoma G361, promyelocytic leukemia, HeLa S3, chronic myelagenous leukemia, lymphoblastic leukemia, Burkitt's lymphoma and colorectal adenocarcinoma, suggesting a potent role in tumorigenesis. Two isoforms of NDOR1 are expressed due to alternative splicing events.

REFERENCES

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3. Olteanu, H. and Banerjee, R. 2003. Redundancy in the pathway for redox regulation of mammalian methionine synthase: reductive activation by the dual flavoprotein, novel reductase 1. J. Biol. Chem. 278: 38310-38314.
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6. Amada, N., Aihara, K., Ravid, R. and Horie, M. 2005. Reduction of NR1 and phosphorylated Ca^{2+}/calmodulin-dependent protein kinase II levels in Alzheimer's disease. Neuroreport 16: 1809-1813.
7. Finn, R.D., Wilkie, M., Smith, G. and Paine, M.J. 2005. Identification of a functionally impaired allele of human novel oxidoreductase 1 (NDOR1), NDOR1*1. Pharmacogenet. Genomics 15: 381-386.

CHROMOSOMAL LOCATION

Genetic locus: NDOR1 (human) mapping to 9q34.3; Ndor1 (mouse) mapping to 2 A3.

SOURCE

NDOR1 (XX-9) is a mouse monoclonal antibody raised against recombinant NDOR1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 50 µg IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NDOR1 (XX-9) is recommended for detection of NDOR1 of mouse, rat and 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).

Suitable for use as control antibody for NDOR1 siRNA (h): sc-92596, NDOR1 siRNA (m): sc-149864, NDOR1 shRNA Plasmid (h): sc-92596-SH, NDOR1 shRNA Plasmid (m): sc-149864-SH, NDOR1 shRNA (h) Lentiviral Particles: sc-92596-V and NDOR1 shRNA (m) Lentiviral Particles: sc-149864-V.

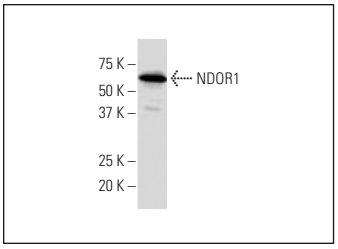
Molecular Weight of NDOR1: 67 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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, UltraCruz® Blocking Reagent: sc-516214 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



NDOR1 (XX-9): sc-100482. Western blot analysis of NDOR1 expression in HeLa whole cell lysate.

STORAGE

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

PROTOCOLS

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