SANTA CRUZ BIOTECHNOLOGY, INC.

NADSYN1 (m): 293T Lysate: sc-127189

BACKGROUND

NAD (nicotinamide adenine dinucleotide) is a cofactor that participates in a wide variety of functions, including metabolic redox reactions, cell signaling events and post-translational protein modifications. The synthesis of NAD within the cell is dependent upon a number of enzymes, called NAD synthetases, that work in concert to catalyze the reactions that form NAD. NADSYN1 (NAD synthetase 1) is a 706 amino acid protein that contains one CN (carbon-nitrogen) hydrolase domain and is a member of the NAD synthetase family. Expressed at high levels in testis, kidney, liver and small intestine, NADSYN1 catalyzes the ATP-dependent conversion of deamido-NAD^+ to free NAD^+. NADSYN1 exists as a homohexamer that uses both ammonia and glutamate as amide donors. NADSYN1 is present in human promyelocytic leukemia and glioma cell lines, suggesting a possible role in tumor formation.

REFERENCES

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3. Jauch, R., Humm, A., Huber, R. and Wahl, M.C. 2005. Structures of *Escherichia coli* NAD synthetase with substrates and products reveal mechanistic rearrangements. J. Biol. Chem. 280: 15131-15140.
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5. Wojcik, M., Seidle, H.F., Bieganowski, P. and Brenner, C. 2006. Glutamine-dependent NAD^+ synthetase. How a two-domain, three-substrate enzyme avoids waste. J. Biol. Chem. 281: 33395-33402.

CHROMOSOMAL LOCATION

Genetic locus: Nadsyn1 (mouse) mapping to 7 F5.

PRODUCT

NADSYN1 (m): 293T Lysate represents a lysate of mouse NADSYN1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

NADSYN1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NADSYN1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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