



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# 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<sup>+</sup> to free NAD<sup>+</sup>. NADSYN1 exists as a homo-hexamers 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

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608285. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Hara, N., Yamada, K., Terashima, M., Osago, H., Shimoyama, M. and Tsuchiya, M. 2003. Molecular identification of human glutamine- and ammonia-dependent NAD synthetases. Carbon-nitrogen hydrolase domain confers glutamine dependency. *J. Biol. Chem.* 278: 10914-10921.
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.
4. Bellinzoni, M., Buroni, S., Pasca, M.R., Guglielame, P., Arcesi, F., De Rossi, E. and Riccardi, G. 2005. Glutamine amidotransferase activity of NAD<sup>+</sup> synthetase from *Mycobacterium tuberculosis* depends on an amino-terminal nitrilase domain. *Res. Microbiol.* 156: 173-177.
5. Wojcik, M., Seidle, H.F., Bieganowski, P. and Brenner, C. 2006. Glutamine-dependent NAD<sup>+</sup> 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](http://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.