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Zuschläge

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- Trockeneiszuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

NMNAT-3 (m): 293T Lysate: sc-122083

BACKGROUND

NMNAT proteins are essential cofactors involved in the fundamental processes of cell metabolism. They belong to the eukaryotic NMN adenylyltransferase family. NMNATs participate in the synthesis of NAD^+ by catalyzing the condensation of nicotinamide mononucleotide and ATP. The presence of magnesium and other divalent cations increases their enzymatic activity. The interaction of NMNATs with nuclear proteins is likely to be modulated by phosphorylation. NMNAT proteins contain at least three potential phosphorylation sites and may act as substrates for nuclear kinases. NMNAT-3 (nicotinamide mononucleotide adenylyltransferase-3), also designated PNAT3, is a 252 amino acid protein that localizes to the mitochondria. Highly expressed in the spleen and lungs, NMNAT-3 is able to form homotetramers. Two isoforms exist due to alternative splicing events.

REFERENCES

1. Sestini, S., et al. 2000. Enzyme activities leading to NAD synthesis in human lymphocytes. Arch. Biochem. Biophys. 379: 277-282.
2. Raffaelli, N., et al. 2002. Identification of a novel human nicotinamide mononucleotide adenylyltransferase. Biochem. Biophys. Res. Commun. 297: 835-840.
3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608702. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Berger, F., et al. 2005. Subcellular compartmentation and differential catalytic properties of the three human nicotinamide mononucleotide adenylyltransferase isoforms. J. Biol. Chem. 280: 36334-36341.
5. Mulligan, M.K., et al. 2006. Toward understanding the genetics of alcohol drinking through transcriptome meta-analysis. Proc. Natl. Acad. Sci. USA 103: 6368-6373.
6. Berger, F., et al. 2007. Regulation of poly(ADP-ribose) polymerase 1 activity by the phosphorylation state of the nuclear NAD biosynthetic enzyme NMN adenylyltransferase-1. Proc. Natl. Acad. Sci. USA 104: 3765-3770.

CHROMOSOMAL LOCATION

Genetic locus: Nmnat3 (mouse) mapping to 9 E3.3.

PRODUCT

NMNAT-3 (m): 293T Lysate represents a lysate of mouse NMNAT-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NMNAT-3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NMNAT-3 antibodies. Recommended use: 10-20 µl per lane.

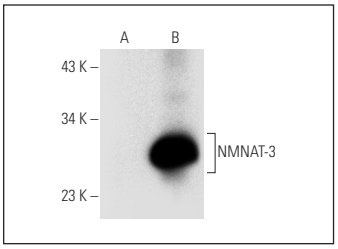
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NMNAT-3 (B-9): sc-398848 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse NMNAT-3 expression in NMNAT-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



NMNAT-3 (B-9): sc-398848. Western blot analysis of NMNAT-3 expression in non-transfected: sc-117752 (**A**) and mouse NMNAT-3 transfected: sc-122083 (**B**) 293T whole cell lysates.

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.

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.