

NMNAT-3 (H-80): sc-134936

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.

CHROMOSOMAL LOCATION

Genetic locus: NMNAT3 (human) mapping to 3q23; Nmnat3 (mouse) mapping to 9 E3.3.

SOURCE

NMNAT-3 (H-80) is a rabbit polyclonal antibody raised against amino acids 151-230 mapping near the C-terminus of NMNAT-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NMNAT-3 (H-80) is recommended for detection of NMNAT-3 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NMNAT-3 (H-80) is also recommended for detection of NMNAT-3 in additional species, including porcine.

Suitable for use as control antibody for NMNAT-3 siRNA (h): sc-62695, NMNAT-3 siRNA (m): sc-62696, NMNAT-3 shRNA Plasmid (h): sc-62695-SH, NMNAT-3 shRNA Plasmid (m): sc-62696-SH, NMNAT-3 shRNA (h) Lentiviral Particles: sc-62695-V and NMNAT-3 shRNA (m) Lentiviral Particles: sc-62696-V.

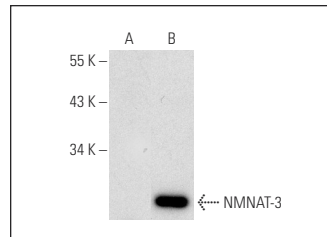
Molecular Weight of NMNAT-3: 28 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NMNAT-3 (H-80): sc-134936. 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 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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **NMNAT-3 (D-10): sc-390433** or **NMNAT-3 (B-9): sc-398848**, our highly recommended monoclonal alternatives to NMNAT-3 (H-80).