

# NMD3 (A-5): sc-515426

## BACKGROUND

Ribosomal subunits are synthesized in the nucleus and mature 40S and 60S subunits are exported stoichiometrically into the cytoplasm. Together these subunits are composed of four RNA species and approximately 80 structurally distinct proteins. Ribosomal proteins have the ability to pass through the nuclear envelope in the native state, making them the largest of the structures accommodated by the nuclear pore complexes. Nuclear export of the 60S ribosomal subunit depends on the adapter protein NMD3, which contains a CRM-1-dependent leucine-rich nuclear export signal (NES) and a complex, dispersed nuclear localization signal (NLS). The gene encoding NMD3 is located on human chromosome 3, which encodes over 1,100 genes and contains a variety of human cancer related loci.

## REFERENCES

1. Nissan, T.A., et al. 2002. 60S pre-ribosome formation viewed from assembly in the nucleolus until export to the cytoplasm. *EMBO J.* 21: 5539-5547.
2. Johnson, A.W., et al. 2002. Nuclear export of ribosomal subunits. *Trends Biochem. Sci.* 27: 580-585.
3. Trotta, C.R., et al. 2003. Coordinated nuclear export of 60S ribosomal subunits and NMD3 in vertebrates. *EMBO J.* 22: 2841-2851.
4. Thomas, F. and Kutay, U. 2003. Biogenesis and nuclear export of ribosomal subunits in higher eukaryotes depend on the CRM1 export pathway. *J. Cell Sci.* 116: 2409-2419.
5. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
6. Nareyck, G., et al. 2006. Establishment and characterization of two uveal melanoma cell lines derived from tumors with loss of one chromosome 3. *Exp. Eye Res.* 83: 858-864.

## CHROMOSOMAL LOCATION

Genetic locus: NMD3 (human) mapping to 3q26.1; Nmd3 (mouse) mapping to 3 E1.

## SOURCE

NMD3 (A-5) is a mouse monoclonal antibody raised against amino acids 320-377 mapping within an internal region of NMD3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NMD3 (A-5) is available conjugated to agarose (sc-515426 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515426 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515426 PE), fluorescein (sc-515426 FITC), Alexa Fluor® 488 (sc-515426 AF488), Alexa Fluor® 546 (sc-515426 AF546), Alexa Fluor® 594 (sc-515426 AF594) or Alexa Fluor® 647 (sc-515426 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515426 AF680) or Alexa Fluor® 790 (sc-515426 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

NMD3 (A-5) is recommended for detection of NMD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for NMD3 siRNA (h): sc-78248, NMD3 siRNA (m): sc-150008, NMD3 shRNA Plasmid (h): sc-78248-SH, NMD3 shRNA Plasmid (m): sc-150008-SH, NMD3 shRNA (h) Lentiviral Particles: sc-78248-V and NMD3 shRNA (m) Lentiviral Particles: sc-150008-V.

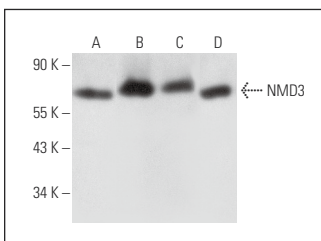
Molecular Weight of NMD3: 58 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Hep G2 cell lysate: sc-2227 or RT-4 whole cell lysate: sc-364257.

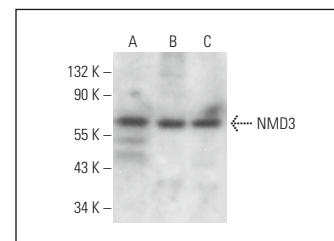
## RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



NMD3 (A-5): sc-515426. Western blot analysis of NMD3 expression in T-47D (A), RT-4 (B) and Hep G2 (C) whole cell lysates and HeLa nuclear extract (D).



NMD3 (A-5): sc-515426. Western blot analysis of NMD3 expression in T24 whole cell lysate (A) and Hep G2 (B) and NIH/3T3 (C) nuclear extracts.

## 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](http://www.scbt.com) for detailed protocols and support products.

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