

Nup93 (3332C2a): sc-81343

BACKGROUND

The nuclear pore complex (NPC) mediates bidirectional macromolecular traffic between the nucleus and cytoplasm in eukaryotic cells and is comprised of more than 100 different subunits. Many of the subunits belong to a family called nucleoporins (Nups), which are characterized by the presence of O-linked-N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). Nup93 (nucleoporin 93) is the most abundant nucleoporin found per NPC, contributing over 10% of the mass. It localizes to the nuclear side of the NPC, predominantly in the basket terminal ring area, and exists in a complex with Nup188, Nup53 and Nup205. This complex is crucial for NPC stability and proper assembly. Nup93 interacts directly with the Nup62 complex located at the center of the NPC and thus tethers the two subcomplexes. Nup93 is composed of a coiled-coil domain at its N-terminus and a C-terminal helical domain. Its proper function is essential for cell viability and normal NPC function.

REFERENCES

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- Hase, M.E. and Cordes, V.C. 2003. Direct interaction with Nup153 mediates binding of Tpr to the periphery of the nuclear pore complex. *Mol. Biol. Cell* 14: 1923-1940.
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- Krull, S., et al. 2004. Nucleoporins as components of the nuclear pore complex core structure and TPR as the architectural element of the nuclear basket. *Mol. Biol. Cell* 15: 4261-4277.
- Hawryluk-Gara, L.A., et al. 2005. Vertebrate Nup53 interacts with the nuclear lamina and is required for the assembly of a Nup93-containing complex. *Mol. Biol. Cell* 16: 2382-2394.
- Ryan, C.M., et al. 2006. Functional interaction of CREB binding protein (CBP) with nuclear transport proteins and modulation by HDAC inhibitors. *Cell Cycle* 5: 2146-2152.

CHROMOSOMAL LOCATION

Genetic locus: NUP93 (human) mapping to 16q13; Nup93 (mouse) mapping to 8 C5.

SOURCE

Nup93 (3332C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of Nup93 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

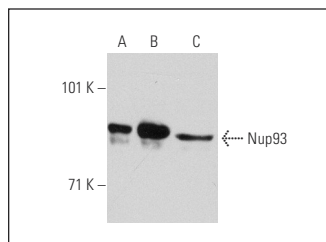
Nup93 (3332C2a) is recommended for detection of Nup93 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Nup93 siRNA (h): sc-75982, Nup93 siRNA (m): sc-75983, Nup93 shRNA Plasmid (h): sc-75982-SH, Nup93 shRNA Plasmid (m): sc-75983-SH, Nup93 shRNA (h) Lentiviral Particles: sc-75982-V and Nup93 shRNA (m) Lentiviral Particles: sc-75983-V.

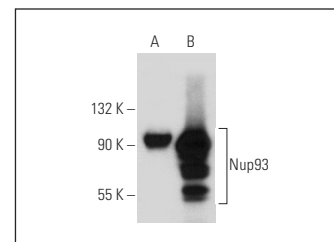
Molecular Weight of Nup93: 90 kDa.

Positive Controls: Nup93 (h): 293T Lysate: sc-113867, Nup93 (m): 293T Lysate: sc-122177 or HeLa whole cell lysate: sc-2200.

DATA



Nup93 (3332C2a): sc-81343. Western blot analysis of Nup93 expression in non-transfected 293T: sc-117752 (A), human Nup93 transfected 293T: sc-113867 (B) and HeLa (C) whole cell lysates.



Nup93 (3332C2a): sc-81343. Western blot analysis of Nup93 expression in non-transfected 293T: sc-117752 (A) and mouse Nup93 transfected: sc-122177 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Guo, Y. and Zheng, Y. 2015. Lamins position the nuclear pores and centrosomes by modulating dynein. *Mol. Biol. Cell* 26: 3379-3389.
- Sun, L., et al. 2015. Identification of proteins associated with Aha1 in HeLa cells by quantitative proteomics. *Biochim. Biophys. Acta* 1854: 365-380.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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