

Nup93 (F-2): sc-374400

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.

CHROMOSOMAL LOCATION

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

SOURCE

Nup93 (F-2) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Nup93 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nup93 (F-2) is available conjugated to agarose (sc-374400 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374400 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374400 PE), fluorescein (sc-374400 FITC), Alexa Fluor® 488 (sc-374400 AF488), Alexa Fluor® 546 (sc-374400 AF546), Alexa Fluor® 594 (sc-374400 AF594) or Alexa Fluor® 647 (sc-374400 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374400 AF680) or Alexa Fluor® 790 (sc-374400 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nup93 (F-2) is recommended for detection of Nup93 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 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.

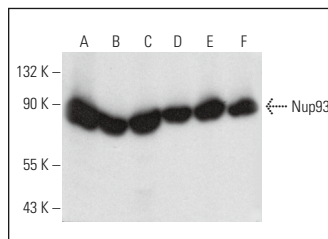
Molecular Weight of Nup93: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, T24 cell lysate: sc-2292, or LADMAC whole cell lysate: sc-364189.

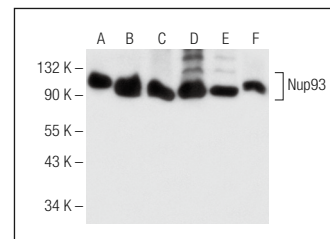
STORAGE

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

DATA



Nup93 (F-2): sc-374400. Western blot analysis of Nup93 expression in Jurkat (A), RT-4 (B), F9 (C), NIH/3T3 (D), NBT-II (E) and KNRK (F) whole cell lysates.



Nup93 (F-2): sc-374400. Western blot analysis of Nup93 expression in 293T (A), T24 (B), HeLa (C), K-562 (D), LADMAC (E) and MTE1D (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- Isnard, A., et al. 2015. Impact of *Leishmania* infection on host macrophage nuclear physiology and nucleopore complex integrity. *PLoS Pathog.* 11: e1004776.
- Braun, D.A., et al. 2016. Mutations in nuclear pore genes Nup93, Nup205 and XPO5 cause steroid-resistant nephrotic syndrome. *Nat. Genet.* 48: 457-465.
- Borlido, J., et al. 2018. Nuclear pore complex-mediated modulation of TCR signaling is required for naïve CD4⁺ T cell homeostasis. *Nat. Immunol.* 19: 594-605.
- Liu, Z., et al. 2019. Nucleoporin Seh1 interacts with Olig2/Brd7 to promote oligodendrocyte differentiation and myelination. *Neuron* 102: 587-601.e7.
- Nataraj, N.B., et al. 2022. Nucleoporin-93 reveals a common feature of aggressive breast cancers: robust nucleocytoplasmic transport of transcription factors. *Cell Rep.* 38: 110418.
- Wu, M., et al. 2023. Nucleoporin Seh1 maintains Schwann cell homeostasis by regulating genome stability and necroptosis. *Cell Rep.* 42: 112802.
- Manolis, D., et al. 2024. Quantitative proteomics reveals CLR interactome in primary human cells. *J. Biol. Chem.* 300: 107399.

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.

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