

Nup93 (D-17): sc-74768

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

1. Grandi, P., et al. 1997. Nup93, a vertebrate homologue of yeast Nic96p, forms a complex with a novel 205-kDa protein and is required for correct nuclear pore assembly. *Mol. Biol. Cell* 8: 2017-2038.
2. Kosova, B., et al. 1999. Nup192p is a conserved nucleoporin with a preferential location at the inner site of the nuclear membrane. *J. Biol. Chem.* 274: 22646-22651.
3. 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.
4. Galy, V., et al. 2003. *Caenorhabditis elegans* nucleoporins Nup93 and Nup205 determine the limit of nuclear pore complex size exclusion *in vivo*. *Mol. Biol. Cell* 14: 5104-5115.
5. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Nup93 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nup93 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.

Blocking peptide available for competition studies, sc-74768 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Nup93 (D-17) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Nup93 (D-17) is also recommended for detection of Nup93 in additional species, including equine, canine, bovine, porcine and avian.

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.

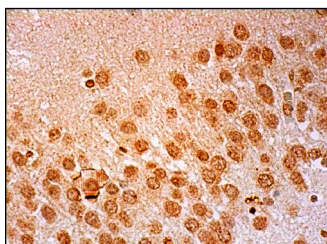
Molecular Weight of Nup93: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Nup93 (D-17): sc-74768. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing nuclear staining of neuronal cells and glial cells.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Nup93 (E-8): sc-374399** or **Nup93 (F-2): sc-374400**, our highly recommended monoclonal alternatives to Nup93 (D-17).