

Nup50 (V-24): sc-133859

BACKGROUND

Nuclear pore complexes (NPCs) are the channels for the bi-directional movement of macromolecules between the nucleus and cytoplasm, and contain more than 100 different subunits. Many of them belong to a family called nucleoporins, which are characterized by the presence of O-linked N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). Nup50 (nucleoporin 50), also known as NPAP60 or NPAP60L (nuclear pore-associated protein 60 kDa-like), is a 468 amino acid nuclear protein that functions as a binding site for export receptor-cargo complexes. Localizing to the nucleoplasmic fibrils of the nuclear pore complex, Nup50 associates with various transport receptor proteins including p27. While ubiquitously expressed, Nup50 is found at highest levels in peripheral blood leukocytes, testis and fetal liver, and contains multiple FG repeats in addition to a single RanBD1 domain.

REFERENCES

1. Trichet, V., et al. 1999. Mapping and complex expression pattern of the human NPAP60L nucleoporin gene. *Cytogenet. Cell Genet.* 85: 221-226.
2. Guan, T., et al. 2000. Nup50, a nucleoplasmically oriented nucleoporin with a role in nuclear protein export. *Mol. Cell. Biol.* 20: 5619-5630.
3. Smitherman, M., et al. 2000. Characterization and targeted disruption of murine Nup50, a p27^{Kip1}-interacting component of the nuclear pore complex. *Mol. Cell. Biol.* 20: 5631-5642.
4. Lindsay, M.E., et al. 2002. Npap60/Nup50 is a tri-stable switch that stimulates importin- α : β -mediated nuclear protein import. *Cell* 110: 349-360.
5. Swaminathan, S., et al. 2002. Nucleocytoplasmic transport: more than the usual suspects. *Dev. Cell* 3: 304-306.
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7. Yu, Y., et al. 2006. Nucleophosmin is essential for ribosomal protein L5 nuclear export. *Mol. Cell. Biol.* 26: 3798-3809.

CHROMOSOMAL LOCATION

Genetic locus: NUP50 (human) mapping to 22q13.31.

SOURCE

Nup50 (V-24) is an affinity purified rabbit polyclonal antibody raised against synthetic Nup50 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

Nup50 (V-24) is recommended for detection of Nup50 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nup50 siRNA (h): sc-75979, Nup50 shRNA Plasmid (h): sc-75979-SH and Nup50 shRNA (h) Lentiviral Particles: sc-75979-V.

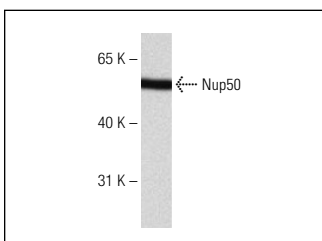
Molecular Weight of Nup50: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

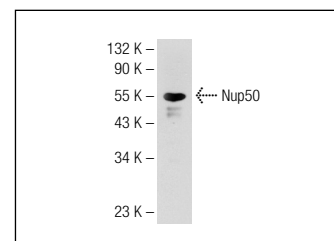
RECOMMENDED SECONDARY REAGENTS

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).

DATA



Nup50 (V-24): sc-133859. Western blot analysis of Nup50 expression in Hep G2 whole cell lysate.



Nup50 (V-24): sc-133859. Western blot analysis of Nup50 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Hori, K., et al. 2012. Vasopressin V1a receptor is required for nucleocytoplasmic transport of mineralocorticoid receptor. *Am. J. Physiol. Renal Physiol.* 303: F1080-F1088.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Nup50 (G-4): sc-398993** or **Nup50 (B-6): sc-398992**, our highly recommended monoclonal alternatives to Nup50 (V-24).