

Nup88 (22): sc-136009

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). Nup88 (nucleoporin 88 kDa) is a 741 amino acid protein that localizes to the nucleus and functions as an essential component of the nuclear pore complex. Expressed ubiquitously, Nup88 is subject to phosphorylation by ATM or ATR and is upregulated in malignant neoplasms and precancerous dysplasias, suggesting a role in tumorigenesis. The gene encoding Nup88 maps to human chromosome 17p13.2, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Fornerod, M., et al. 1997. The human homologue of yeast CRM1 is in a dynamic subcomplex with CAN/Nup214 and a novel nuclear pore component Nup88. *EMBO J.* 16: 807-816.
2. Fornerod, M., et al. 1997. Chromosomal localization of genes encoding CAN/Nup214-interacting proteins—human CRM1 localizes to 2p16, whereas Nup88 localizes to 17p13 and is physically linked to SF2p32. *Genomics* 42: 538-540.
3. Martínez, N., et al. 1999. The nuclear pore complex protein Nup88 is overexpressed in tumor cells. *Cancer Res.* 59: 5408-5411.
4. Stoffer, D., et al. 1999. The nuclear pore complex: from molecular architecture to functional dynamics. *Curr. Opin. Cell Biol.* 11: 391-401.
5. Gould, V.E., et al. 2000. A novel, nuclear pore-associated, widely distributed molecule overexpressed in oncogenesis and development. *Am. J. Pathol.* 157: 1605-1613.
6. Gould, V.E., et al. 2002. Nup88 (karyoporin) in human malignant neoplasms and dysplasias: correlations of immunostaining of tissue sections, cytologic smears, and immunoblot analysis. *Hum. Pathol.* 33: 536-544.
7. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 602552. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Agudo, D., et al. 2004. Nup88 mRNA overexpression is associated with high aggressiveness of breast cancer. *Int. J. Cancer* 109: 717-720.

CHROMOSOMAL LOCATION

Genetic locus: NUP88 (human) mapping to 17p13.2; Nup88 (mouse) mapping to 11 B4.

SOURCE

Nup88 (22) is a mouse monoclonal antibody raised against amino acids 314-425 of Nup88 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

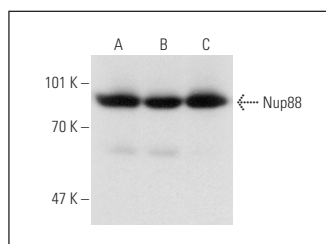
Nup88 (22) is recommended for detection of Nup88 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Nup88 siRNA (h): sc-75980, Nup88 siRNA (m): sc-75981, Nup88 shRNA Plasmid (h): sc-75980-SH, Nup88 shRNA Plasmid (m): sc-75981-SH, Nup88 shRNA (h) Lentiviral Particles: sc-75980-V and Nup88 shRNA (m) Lentiviral Particles: sc-75981-V.

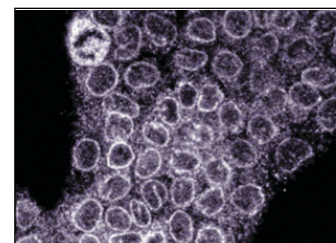
Molecular Weight of Nup88: 88 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

DATA



Nup88 (22): sc-136009. Western blot analysis of Nup88 expression in A-431 (A), HeLa (B) and IMR-32 (C) nuclear extracts.



Nup88 (22): sc-136009. Immunofluorescence staining of A-431 cells showing nuclear envelope localization.

SELECT PRODUCT CITATIONS

1. Arai, T., et al. 2015. Translocation of forkhead box O1 to the nuclear periphery induces histone modifications that regulate transcriptional repression of PCK1 in Hep G2 cells. *Genes Cells* 20: 340-357.
2. Wang, C., et al. 2017. The flightless I protein interacts with RNA-binding proteins and is involved in the genome-wide mRNA post-transcriptional regulation in lung carcinoma cells. *Int. J. Oncol.* 51: 347-361.
3. Bilir, S., et al. 2019. Roles of Nup133, Nup153 and membrane fenestrations in assembly of the nuclear pore complex at the end of mitosis. *Genes Cells* 24: 338-353.

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. Not for resale.

PROTOCOLS

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