SANTA CRUZ BIOTECHNOLOGY, INC.

Nup88 (H-7): sc-365868

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

CHROMOSOMAL LOCATION

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

SOURCE

Nup88 (H-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Nup88 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.

Nup88 (H-7) is available conjugated to agarose (sc-365868 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365868 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365868 PE), fluorescein (sc-365868 FITC), Alexa Fluor® 488 (sc-365868 AF488), Alexa Fluor® 546 (sc-365868 AF546), Alexa Fluor® 594 (sc-365868 AF594) or Alexa Fluor® 647 (sc-365868 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365868 AF680) or Alexa Fluor® 790 (sc-365868 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nup88 (H-7) is recommended for detection of Nup88 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), 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).

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.

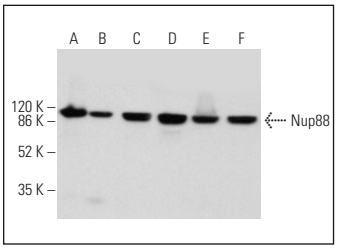
Molecular Weight of Nup88: 88 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

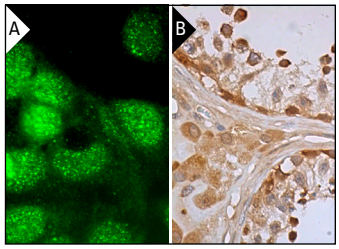
STORAGE

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

DATA



Nup88 (H-7): sc-365868. Western blot analysis of Nup88 expression in HeLa (**A**), Hep G2 (**B**), A-431 (**C**), Jurkat (**D**), MDA-MB-435S (**E**) and COLO 205 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Nup88 (H-7): sc-365868. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Izumi, Y., et al. 2012. Mutations that reduce its specific DNA binding inhibit high NaCl-induced nuclear localization of the osmoprotective transcription factor NFAT5. Am. J. Physiol. Cell Physiol. 303: C1061-C1069.
2. Naylor, R.M., et al. 2016. Nuclear pore protein Nup88 activates anaphase-promoting complex to promote aneuploidy. J. Clin. Invest. 126: 543-559.
3. Ji, F., et al. 2018. The role of 5-hydroxymethylcytosine in mitochondria after ischemic stroke. J. Neurosci. Res. 96: 1717-1726.
4. Gomez, G.N., et al. 2019. SARS coronavirus protein nsp1 disrupts localization of Nup93 from the nuclear pore complex. Biochem. Cell Biol. 97: 758-766.
5. Spriggs, C.C., et al. 2022. Components of the LINC and NPC complexes coordinately target and translocate a virus into the nucleus to promote infection. PLoS Pathog. 18: e1010824.
6. Wang, B., et al. 2023. The mitochondrial Ahi1/GR participates the regulation on mtDNA copy numbers and brain ATP levels and modulates depressive behaviors in mice. Cell Commun. Signal. 21: 21.

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.