SANTA CRUZ BIOTECHNOLOGY, INC.

Nup133 (E-6): sc-376763

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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). Nuclear pore complex protein Nup133 (Nucleoporin Nup133) is located on both the cytoplasmic and nuclear sides of the nuclear pore, localizing to the kinetochores during mitosis. It forms a part of the Nup160 nuclear pore subcomplex together with Nup160, Nup96 and Nup107. This complex is important in RNA export.

CHROMOSOMAL LOCATION

Genetic locus: NUP133 (human) mapping to 1q42.13; Nup133 (mouse) mapping to 8 E2.

SOURCE

Nup133 (E-6) is a mouse monoclonal antibody raised against amino acids 813-1156 mapping at the C-terminus of Nup133 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nup133 (E-6) is available conjugated to agarose (sc-376763 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376763 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376763 PE), fluorescein (sc-376763 FITC), Alexa Fluor® 488 (sc-376763 AF488), Alexa Fluor® 546 (sc-376763 AF546), Alexa Fluor® 594 (sc-376763 AF594) or Alexa Fluor® 647 (sc-376763 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376763 AF680) or Alexa Fluor® 790 (sc-376763 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Nup133 (E-6) is recommended for detection of Nup133 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 Nup133 siRNA (h): sc-60035, Nup133 siRNA (m): sc-60036, Nup133 shRNA Plasmid (h): sc-60035-SH, Nup133 shRNA Plasmid (m): sc-60036-SH, Nup133 shRNA (h) Lentiviral Particles: sc-60035-V and Nup133 shRNA (m) Lentiviral Particles: sc-60036-V.

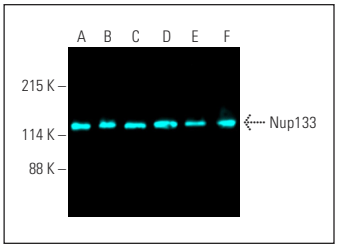
Molecular Weight of Nup133: 130 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or Hep G2 nuclear extract: sc-364819.

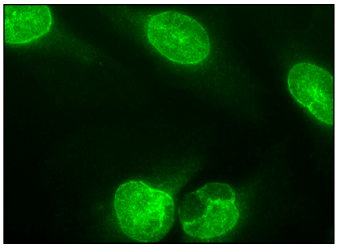
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Nup133 (E-6) Alexa Fluor® 647: sc-376763 AF647. Direct fluorescent western blot analysis of Nup133 expression in HeLa (**A**) and Hep G2 (**B**) nuclear extracts and HeLa (**C**), K-562 (**D**), Ramos (**E**) and SH-SY5Y (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Nup133 (E-6): sc-376763. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization.

SELECT PRODUCT CITATIONS

1. Kane, M., et al. 2018. Nuclear pore heterogeneity influences HIV-1 infection and the antiviral activity of MX2. Elife 7: e35738.
2. Lee, C.M., et al. 2019. JLP-centrosome is essential for the microtubule-mediated nucleocytoplasmic transport induced by extracellular stimuli. Sci. Adv. 5: eaav0318.
3. Jevtic, P., et al. 2019. The nucleoporin ELYS regulates nuclear size by controlling NPC number and nuclear import capacity. EMBO Rep. 20: e47283.
4. Marco, S., et al. 2021. Nuclear-capture of endosomes depletes nuclear G-Actin to promote SRF/MRTF activation and cancer cell invasion. Nat. Commun. 12: 6829.
5. Rogg, M., et al. 2022. Nup133 controls nuclear pore assembly, transcriptome composition, and cytoskeleton regulation in podocytes. Cells 11: 1259.
6. 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.
7. Han, L., et al. 2022. Changes in nuclear pore numbers control nuclear import and stress response of mouse hearts. Dev. Cell 57: 2397-2411.e9.

RESEARCH USE

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