

Nup153 (m): 293T Lysate: sc-122173

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). Nup153 is a peripheral NPC component that is implicated in protein and RNP transport and in the interaction of NPCs with the nuclear lamina. Nup153 contains a unique N-terminal region, a central domain consisting of four to five zinc fingers and a C-terminal region containing about 30 irregularly spaced XFXFG repeats. Nup153 is cleaved by caspases during apoptosis. Nup153 interacts with TAP, which is essential for mRNA export and associates with chromatin towards the end of anaphase, in parallel with the inner nuclear membrane protein, LAP2. Nup153 is involved in NPC assembly, in anchoring NPCs within the nuclear envelope and in mediating specific nuclear import events.

REFERENCES

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2. Bastos, R., Lin, A., Enarson, M. and Burke, B. 1996. Targeting and function in mRNA export of nuclear pore complex protein Nup153. *J. Cell Biol.* 134: 1141-1156.
3. Bodoor, K., Shaikh, S., Salina, D., Raharjo, W.H., Bastos, R., Lohka, M. and Burke, B. 1999. Sequential recruitment of NPC proteins to the nuclear periphery at the end of mitosis. *J. Cell Sci.* 112: 2253-2264.
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5. Ferrando-May, E., Cordes, V., Biller-Ckovic, I., Mirkovic, J., Gorlich, D. and Nicotera, P. 2001. Caspases mediate nucleo-protein cleavage, but not early redistribution of nuclear transport factors and modulation of nuclear permeability in apoptosis. *Cell Death Differ.* 8: 495-505.
6. Walther, T.C., Fornerod, M., Pickersgill, H., Goldberg, M., Allen, T.D. and Mattaj, J.W. 2001. The nucleoporin Nup153 is required for nuclear pore basket formation, nuclear pore complex anchoring and import of a subset of nuclear proteins. *EMBO J.* 20: 5703-5714.

CHROMOSOMAL LOCATION

Genetic locus: Nup153 (mouse) mapping to 13 A5.

PRODUCT

Nup153 (m): 293T Lysate represents a lysate of mouse Nup153 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

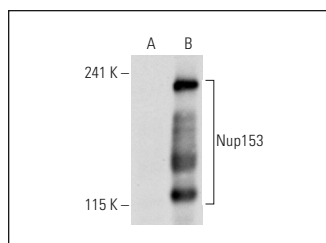
APPLICATIONS

Nup153 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Nup153 antibodies. Recommended use: 10-20 µl per lane.

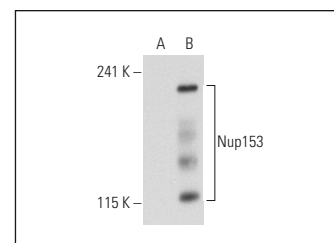
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Nup153 (R3G1): sc-101544 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Nup153 expression in Nup153 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Nup153 (R3G1): sc-101544. Western blot analysis of Nup153 expression in non-transfected: sc-117752 (A) and mouse Nup153 transfected: sc-122173 (B) 293T whole cell lysates.



Nup153 (R4C8): sc-101545. Western blot analysis of Nup153 expression in non-transfected: sc-117752 (A) and mouse Nup153 transfected: sc-122173 (B) 293T whole cell lysates.

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.