

Nup43 (N-12): sc-109352

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). Nup43 (nucleoporin 43 kDa) is a 380 amino acid protein that contains 6 WD domains and exists as a component of the Nup107-160 subcomplex of the nuclear pore complex (NPC). The Nup107-160 subcomplex is required for the assembly of a functional NPC as well as for normal kinetochore microtubule attachment, mitotic progression and chromosome segregation. Members of the Nup107-160 subcomplex include NUP160, NUP133, NUP107, NUP98, NUP85, NUP37, SEH1 and SEC13.

REFERENCES

- Schlenstedt, G. 1996. Protein import into the nucleus. *FEBS Lett.* 389: 75-79.
- Hu, T., Guan, T. and Gerace, L. 1996. Molecular and functional characterization of the p62 complex, an assembly of nuclear pore complex glycoproteins. *J. Cell Biol.* 134: 589-601.
- Moroianu, J. 1997. Molecular mechanisms of nuclear protein transport. *Crit. Rev. Eukaryot. Gene Expr.* 7: 61-72.
- Bodoor, K., Shaikh, S., Enarson, P., Chowdhury, S., Salina, D., Raharjo, W.H. and Burke, B. 1999. Function and assembly of nuclear pore complex proteins. *Biochem. Cell Biol.* 77: 321-329.
- Moroianu, J. 1999. Nuclear import and export pathways. *J. Cell. Biochem. Suppl.* 32-33: 76-83.
- Loiodice, I., Alves, A., Rabut, G., Van Overbeek, M., Ellenberg, J., Sibarita, J.B. and Doye, V. 2004. The entire Nup107-160 complex, including three new members, is targeted as one entity to kinetochores in mitosis. *Mol. Biol. Cell* 15: 3333-3344.
- Chakraborty, P., Wang, Y., Wei, J.H., van Deursen, J., Yu, H., Malureanu, L., Dasso, M., Forbes, D.J., Levy, D.E., Seemann, J. and Fontoura, B.M. 2008. Nucleoporin levels regulate cell cycle progression and phase-specific gene expression. *Dev. Cell* 15: 657-667.
- Platani, M., Santarella-Mellwig, R., Posch, M., Walczak, R., Swedlow, J.R. and Mattaj, I.W. 2009. The Nup107-160 nucleoporin complex promotes mitotic events via control of the localization state of the chromosome passenger complex. *Mol. Biol. Cell* 20: 5260-5275.

CHROMOSOMAL LOCATION

Genetic locus: NUP43 (human) mapping to 6q25.1; Nup43 (mouse) mapping to 10 A1.

SOURCE

Nup43 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Nup43 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109352 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Nup43 (N-12) is recommended for detection of Nup43 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other Nup family members.

Nup43 (N-12) is also recommended for detection of Nup43 in additional species, including bovine and porcine.

Suitable for use as control antibody for Nup43 siRNA (h): sc-95534, Nup43 siRNA (m): sc-150124, Nup43 shRNA Plasmid (h): sc-95534-SH, Nup43 shRNA Plasmid (m): sc-150124-SH, Nup43 shRNA (h) Lentiviral Particles: sc-95534-V and Nup43 shRNA (m) Lentiviral Particles: sc-150124-V.

Molecular Weight of Nup43: 43 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **Nup43 (6L4): sc-134406**, our highly recommended monoclonal alternative to Nup43 (N-12).