

# Nup54 (G-15): sc-104482

## 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). Nup54 (nucleoporin 54 kDa) is a 507 amino acid protein that localizes to the nucleus and exists as a component of the NPC, effectively playing a role in protein trafficking across the nuclear membrane. Nup54 exists as multiple alternatively spliced isoforms and is subject to post-translational O-glycosylation. Multiple isoforms of Nup54 exist due to alternative splicing events.

## REFERENCES

- Schlenstedt, G. 1996. Protein import into the nucleus. FEBS Lett. 389: 75-79.
- Hu, T., et al. 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., et al. 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. 32/33: 76-83.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607607. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: NUP54 (human) mapping to 4q21.1; Nup54 (mouse) mapping to 5 E2.

## SOURCE

Nup54 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nup54 of human origin.

## 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-104482 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Nup54 (G-15) is recommended for detection of Nup54 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)], 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.

Nup54 (G-15) is also recommended for detection of Nup54 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Nup54 siRNA (h): sc-89240, Nup54 siRNA (m): sc-106321, Nup54 shRNA Plasmid (h): sc-89240-SH, Nup54 shRNA Plasmid (m): sc-106321-SH, Nup54 shRNA (h) Lentiviral Particles: sc-89240-V and Nup54 shRNA (m) Lentiviral Particles: sc-106321-V.

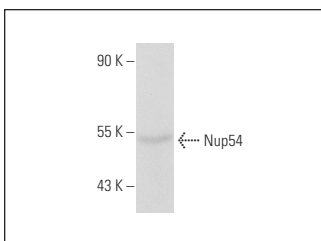
Molecular Weight of Nup54: 54 kDa.

Positive Controls: mouse embryo extract: sc-364239.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Nup54 (G-15): sc-104482. Western blot analysis of Nup54 expression in mouse embryo tissue extract.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.