SANTA CRUZ BIOTECHNOLOGY, INC.

NupL1 (T-19): sc-84538

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). NupL1 (Nucleoporin-like 1), also designated nucleoporin p58/p45, is a 599 amino acid protein that contains FG repeats and exists as a component of the p62 complex, which includes Nup62, Nup54, and NupL1. The p62 complex localizes near the central gated channel of the nuclear pore complex. Specifically, NupL1 interacts with SRP1-α and Importin p97 when they are together, but not with SRP1-α protein alone.

REFERENCES

1. Schlenstedt, G. 1996. Protein import into the nucleus. FEBS Lett. 389: 75-79.

2. 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.

3. Moroianu, J. 1997. Molecular mechanisms of nuclear protein transport. Crit. Rev. Eukaryot. Gene Expr. 7: 61-72.

4. Hu, T. and Gerace, L. 1998. cDNA cloning and analysis of the expression of nucleoporin p45. Gene 221: 245-253.

5. 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.

6. Moroianu, J. 1999. Nuclear import and export pathways. J. Cell. Biochem. Suppl. 32-33: 76-83.

7. Schwarz-Herion, K., Maco, B., Sauder, U. and Fahrenkrog, B. 2007. Domain topology of the p62 complex within the 3-D architecture of the nuclear pore complex. J. Mol. Biol. 370: 796-806.

8. Melcák, I., Hoelz, A. and Blobel, G. 2007. Structure of Nup58/45 suggests flexible nuclear pore diameter by intermolecular sliding. Science 315: 1729-1732.

CHROMOSOMAL LOCATION

Genetic locus: NUPL1 (human) mapping to 13q12.13; Nupl1 (mouse) mapping to 14 D1.

SOURCE

NupL1 (T-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NupL1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84538 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NupL1 (T-19) is recommended for detection of NupL1 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 isoforms p58 and 2.

NupL1 (T-19) is also recommended for detection of NupL1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for NupL1 siRNA (h): sc-75984, NupL1 siRNA (m): sc-150127, NupL1 shRNA Plasmid (h): sc-75984-SH, NupL1 shRNA Plasmid (m): sc-150127-SH, NupL1 shRNA (h) Lentiviral Particles: sc-75984-V and NupL1 shRNA (m) Lentiviral Particles: sc-150127-V.

Molecular Weight of NupL1: 58/45 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

RESEARCH USE

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

PROTOCOLS

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