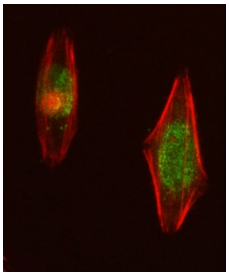
Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody (RQ8307)

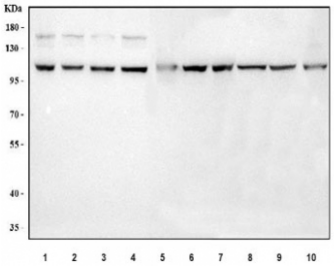
Catalog No.	Formulation	Size
RQ8307	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

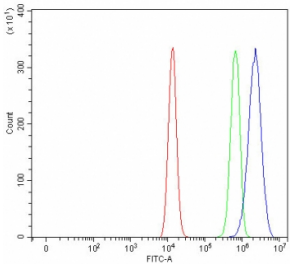
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P57740
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml Immunoprecipitation: 2ug/500ug of lysate Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody is available for research use only.



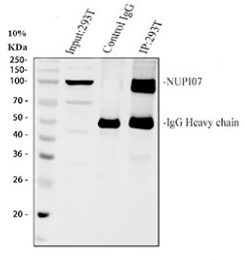
Nucleoporin 107 Antibody in Human U-2 OS Osteosarcoma Cells IF. Immunofluorescence staining of FFPE human U-2 OS osteosarcoma cells with Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody (green) and Phalloidin (red). Heat-induced epitope retrieval (HIER) was performed by steaming in pH 6 citrate buffer for 20 min. NUP107 staining is concentrated in the nuclear region, consistent with its association with the nuclear pore complex. This Nucleoporin 107 Antibody enables visualization of NUP107 expression and localization in human osteosarcoma cells.



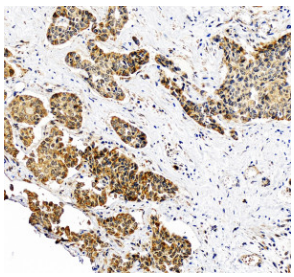
Nucleoporin 107 Antibody in Human, Rat and Mouse Samples WB. Western blot testing of Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody using lysates from 1) human COLO-320 cells, 2) human HepG2 cells, 3) human 293T cells, 4) human HeLa cells, 5) human PC-3 cells, 6) human K562 cells, 7) human HEL cells, 8) rat PC-12 cells, 9) mouse testis and 10) mouse NIH 3T3 cells. A prominent band is detected near the predicted molecular weight of approximately 107 kDa. This Nucleoporin 107 Antibody demonstrates detection of NUP107 in human, rat and mouse samples.



Nucleoporin 107 Antibody in Human HEL Erythroleukemia Cells FACS. Flow cytometry testing of fixed and permeabilized human HEL erythroleukemia cells with Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody at 1 ug/million cells following blocking with goat sera. Red represents cells alone, green represents the isotype control and blue represents Nucleoporin 107 Antibody staining. A clear fluorescence shift is observed with antibody staining relative to the isotype control. This Nucleoporin 107 Antibody demonstrates detection of NUP107 in human HEL cells by flow cytometry.



Nucleoporin 107 Antibody in Human 293T Cells IP. Immunoprecipitation of Nucleoporin 107 protein from 500 ug of human 293T whole cell lysate was performed using 2 ug of Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody. The immunoprecipitated sample was analyzed by western blot, with NUP107 detected near its expected molecular weight of approximately 107 kDa. This Nucleoporin 107 Antibody demonstrates immunoprecipitation of endogenous NUP107 from human 293T cells.



Nucleoporin 107 Antibody in Human Liver Cancer IHC. Immunohistochemistry analysis of FFPE human liver cancer tissue with Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed in EDTA buffer, pH 8.0, followed by blocking with 10% goat serum. The tissue was incubated with the primary antibody overnight at 4oC, followed by a peroxidase-conjugated goat anti-rabbit IgG secondary antibody for 30 min at 37oC and DAB detection. NUP107 staining is observed in the tumor cells. This Nucleoporin 107 Antibody demonstrates detection of NUP107 in human liver cancer tissue.

Description

Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody targets NUP107, a conserved component of the nuclear pore complex (NPC), the large multiprotein structure that regulates transport between the nucleus and cytoplasm. NUP107 is a member of the NUP107-160 complex, also known as the Y-complex, which forms an important structural scaffold of the nuclear pore. Through its role in NPC organization, NUP107 contributes to the selective movement of proteins, RNA and other macromolecules across the nuclear envelope.

NUP107 functions together with several other nucleoporins, including NUP160, NUP133, NUP96, NUP85, NUP43, NUP37, SEC13 and SEH1. These proteins assemble into the Y-complex and help establish the architecture and stability of nuclear pores. NUP107 is therefore closely associated with nuclear pore assembly, maintenance of nuclear-cytoplasmic compartmentalization and nucleocytoplasmic transport. A Nucleoporin 107 Antibody can be useful for investigating NUP107 expression and the molecular organization of the nuclear pore complex.

In addition to its functions during interphase, NUP107 participates in mitotic processes. Nuclear pore complexes disassemble as cells enter mitosis, and components of the NUP107-160 complex redistribute to mitotic structures, including kinetochores. The complex has been implicated in proper spindle assembly, chromosome segregation and progression through mitosis. Following cell division, NUP107 and associated nucleoporins contribute to the reassembly of

nuclear pores as the nuclear envelope reforms around daughter nuclei. These functions connect nuclear pore proteins with both nuclear transport and cell-cycle regulation.

Altered expression or function of nucleoporins has been investigated in cancer, developmental disorders and diseases involving defects in nuclear transport or genome regulation. NUP107 variants have also been associated with human developmental and renal disorders, highlighting functions of nuclear pore proteins beyond their traditional roles as transport machinery. Research into NUP107 can therefore provide insight into nuclear pore biology, mitosis, cellular organization and mechanisms through which disruption of nucleoporin function contributes to disease.

NSJ Bioreagents provides antibodies for research into nuclear structure, protein localization, cell division and related signaling processes. A Nuclear Pore Complex Antibody targeting NUP107 can support studies of nuclear pore organization, nucleocytoplasmic transport, mitotic regulation and nucleoporin-associated cellular biology.

NUP107-dependent nuclear transport and cellular regulation can be studied alongside related targets available on our Signal Transduction Antibodies page.

Application Notes

Optimal dilution of the Nucleoporin 107 Antibody / Nuclear Pore Complex Antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (K30-H790) was used as the immunogen for the Nucleoporin 107 antibody.

Storage

After reconstitution, the Nucleoporin 107 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Nucleoporin 107 antibody, NUP107 antibody, Nuclear pore complex protein Nup107 antibody, NUP107-160 complex antibody

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