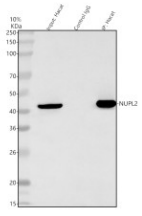
NUP42 Antibody / Nucleoporin 42 Antibody (RQ8394)

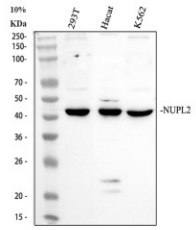
Catalog No.	Formulation	Size
RQ8394	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

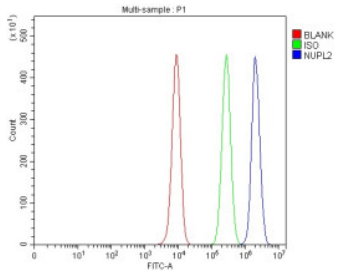
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O15504
Applications	Western blot: 0.5-1ug/ml Immunoprecipitation: 2ug per 500ug of lysate Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This NUP42 Antibody / Nucleoporin 42 Antibody is available for research use only.



NUP42 Antibody by IP in Human HaCaT Cell Lysate. Immunoprecipitation of Nucleoporin 42 from human HaCaT whole-cell lysate using rabbit polyclonal NUP42 antibody. Lane 1 contains 30 ug of input lysate, lane 2 represents a rabbit IgG control immunoprecipitation, and lane 3 contains protein immunoprecipitated from 500 ug of HaCaT lysate using 2 ug of NUP42 antibody. Following electrophoresis and membrane transfer, Western blot detection was performed using the same antibody at 0.5 ug/ml and an HRP-conjugated light-chain-specific secondary antibody. A prominent band is detected at approximately 43-45 kDa in the input and antibody immunoprecipitation lanes, consistent with NUPL2. No corresponding band is detected in the rabbit IgG control lane, demonstrating selective enrichment of NUP42.



NUP42 Antibody by WB in Human 293T, HaCaT and K562 Cells. Western blot analysis of human 293T (lane 1), HaCaT (lane 2), and K562 (lane 3) whole-cell lysates using rabbit polyclonal NUP42 antibody at 0.5 ug/ml. Samples containing 30 ug of protein per lane were separated by 10% SDS-PAGE under reducing conditions and transferred to a nitrocellulose membrane. Following overnight primary antibody incubation at 4oC, detection was performed using HRP-conjugated goat anti-rabbit IgG at 1:5000 and chemiluminescence. Strong immunoreactive bands are detected at approximately 43-45 kDa in all three lysates, consistent with the calculated molecular weight of 44.9 kDa for Nucleoporin 42 (NUPL2).



NUP42 Antibody by FACS in Human HaCaT Cells. Flow cytometry analysis of fixed and permeabilized human HaCaT cells using rabbit polyclonal NUP42 antibody at 1 ug per million cells. Cells were fixed with 4% paraformaldehyde, permeabilized, and blocked with 10% normal goat serum before primary antibody incubation for 30 minutes at 20oC. Fluoro488-conjugated goat anti-rabbit IgG was used for detection. The histogram compares Nucleoporin 42 antibody staining (blue), rabbit IgG isotype control (green), and unstained cells (red). The antibody-stained population exhibits a clear rightward fluorescence shift relative to both controls, demonstrating intracellular detection of NUPL2.

Description

NUP42 Antibody recognizes nucleoporin 42, a protein encoded by the NUPL2 gene that participates in the transport of molecules between the nucleus and cytoplasm. Also known as Nucleoporin 42, NUPL2, and NLP1, this protein is associated with the nuclear pore complex (NPC), a large multiprotein assembly embedded within the nuclear envelope. Nuclear pore complexes regulate the selective movement of proteins, RNA molecules, and ribonucleoprotein particles between nuclear and cytoplasmic compartments, making them essential for normal gene expression and cellular organization.

The nuclear pore complex contains multiple nucleoporins arranged into structural and functional subcomplexes. Some nucleoporins form the central scaffold, while others contribute to transport selectivity and interactions with nuclear transport receptors. NUP42 is associated with the cytoplasmic side of the nuclear pore complex, where it contributes to the final stages of nuclear export. Its position enables interactions with transport machinery involved in releasing exported RNA-containing complexes into the cytoplasm.

One of the principal functions associated with NUP42 is the export of polyadenylated messenger RNA from the nucleus. Following transcription, mRNA molecules undergo processing and assembly into messenger ribonucleoprotein complexes before being transported through nuclear pores. Efficient export ensures that mature transcripts reach the cytoplasm, where they can participate in protein synthesis. Disruption of this process can alter gene expression and interfere with cellular homeostasis.

Nucleoporin 42 is functionally associated with proteins involved in mRNA export and nuclear pore organization. Through these interactions, NUPL2 helps coordinate the movement of RNA-containing complexes across the nuclear envelope. Its activity is particularly relevant to investigations of nucleocytoplasmic trafficking, post-transcriptional gene regulation, and the organization of nuclear transport machinery.

NUP42 has also been investigated in the context of viral infection. Research suggests that it may participate in interactions involving the HIV-1 accessory protein Vpr at the nuclear envelope. These observations have prompted interest in the relationship between nucleoporins, viral proteins, and host-cell nuclear transport pathways.

Because nuclear transport is essential for cellular growth, differentiation, and stress responses, nucleoporins are important targets for research into gene regulation and intracellular trafficking. An NUP42 Antibody from NSJ Bioreagents supports studies investigating Nucleoporin 42 expression, nuclear pore complex function, mRNA export, and the

molecular mechanisms governing transport between the nucleus and cytoplasm.

For antibodies targeting additional proteins involved in nuclear organization, RNA processing, and intracellular transport, explore our Cell Biology Antibodies collection.

Application Notes

Optimal dilution of the NUP42 Antibody / Nucleoporin 42 Antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (Q52-V423) was used as the immunogen for the NUP42 antibody.

Storage

After reconstitution, the NUP42 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

NUPL2 antibody, Nucleoporin-Like Protein 2 antibody, Nucleoporin 42 kDa antibody, Nucleoporin NLP1 antibody, NLP1 antibody, Nuclear Pore Complex Protein NUP42 antibody, hCG1 antibody

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