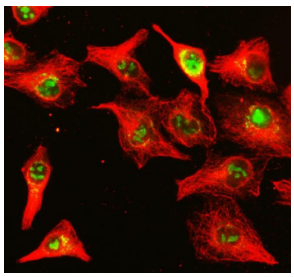
NUP85 Antibody / Nuclear pore complex protein Nup85 (FY12130)

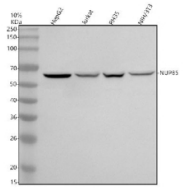
Catalog No.	Formulation	Size
FY12130	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

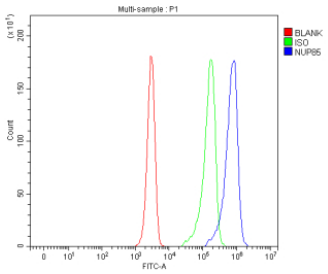
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BW27
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This NUP85 antibody is available for research use only.



Immunofluorescent staining of NUP85 using anti-NUP85 antibody (green) and anti-Beta Tubulin antibody (red). NUP85 was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-NUP85 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of NUP85 using anti-NUP85 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HepG2 whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: rat RH35 whole cell lysates, Lane 4: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NUP85 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected band size for NUP85 is at 75 kDa but it is commonly observed at 60-65 kDa (with possible doublet) due to post-translational proteolytic processing, protein complex formation, and anomalous SDSâ€“PAGE migration due to its composition and structure.



Flow Cytometry analysis of Jurkat cells using anti-NUP85 antibody. Overlay histogram showing Jurkat cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NUP85 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

NUP85 antibody detects Nuclear pore complex protein Nup85, encoded by the NUP85 gene on chromosome 17q11.2. NUP85 antibody is used to study this nucleoporin, a stable component of the nuclear pore complex (NPC) that mediates bidirectional transport of macromolecules between the nucleus and cytoplasm. NUP85 forms part of the NUP107-160 subcomplex, which assembles on both sides of the NPC and is critical for pore biogenesis, nuclear envelope formation, and transport selectivity. NPCs are essential for cell viability, controlling import of transcription factors, RNA-binding proteins, and nuclear enzymes while exporting mRNAs, snRNAs, and ribosomal subunits.

Structurally, NUP85 is a beta-propeller protein containing helical domains that scaffold the NUP107-160 subcomplex. It interacts directly with NUP107, NUP133, and NUP160 to form a stable assembly platform. Cryo-electron microscopy studies have mapped NUP85 within the NPC ring, where it contributes to pore architecture and nucleocytoplasmic transport dynamics. In addition to transport, NUP85 participates in chromatin organization and gene expression, linking the nuclear periphery to regulatory networks.

Functionally, NUP85 is indispensable for cell cycle progression. During mitosis, NPCs disassemble and reassemble, and the NUP107-160 complex drives nuclear envelope reformation. Loss of NUP85 disrupts pore assembly, causing nuclear transport defects and cell cycle arrest. In higher eukaryotes, NUP85 also contributes to developmental programs by influencing signaling pathways such as MAPK and Wnt, mediated through nuclear import of transcriptional regulators. NUP85 antibody is a powerful reagent for dissecting these processes.

Clinically, mutations in NUP85 are associated with nephrotic syndrome and steroid-resistant kidney disease. These phenotypes reflect impaired podocyte nuclear transport and altered gene expression. NUP85 has also been linked to cancer biology, where dysregulated nucleocytoplasmic transport promotes proliferation and therapy resistance. Studies reveal NUP85 overexpression in glioblastoma and breast cancer, suggesting a role in tumor progression. By applying NUP85 antibody, researchers can analyze NPC integrity, nuclear transport activity, and disease mechanisms. NSJ Bioreagents provides NUP85 antibody for use in cell biology, nephrology, and oncology research.

Application Notes

Optimal dilution of the NUP85 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NUP85 recombinant protein (Position: R84-S656) was used as the immunogen for the NUP85 antibody.

Storage

After reconstitution, the NUP85 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.