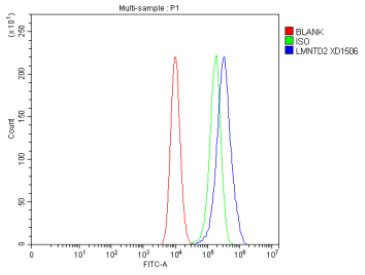
LMNTD2 Antibody / Lamin tail domain-containing protein 2 (FY12348)

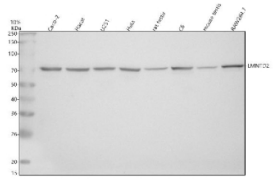
Catalog No.	Formulation	Size
FY12348	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

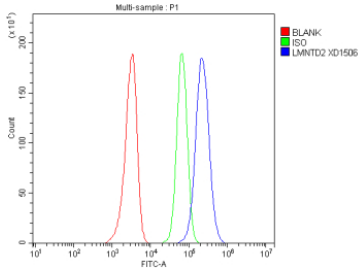
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8IXW0
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This LMNTD2 antibody is available for research use only.



Flow Cytometry analysis of CACO-2 cells using anti-LMNTD2 antibody. Overlay histogram showing CACO-2 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-LMNTD2 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.



Western blot analysis of LMNTD2 using anti-LMNTD2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Caco-2 whole cell lysates, Lane 2: human Hacat whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human Hela whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat C6 whole cellue lysates, Lane 7: mouse testis tissue lysates, Lane 8: mouse RAW264.7 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-LMNTD2 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 molecular weight of LMNTD2 is ~70 kDa.



Flow Cytometry analysis of HEL cells using anti-LMNTD2 antibody. Overlay histogram showing HEL 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-LMNTD2 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

The LMNTD2 antibody targets Lamina-associated polypeptide 2-like protein, encoded by the LMNTD2 gene. This protein belongs to a family of nuclear envelope-associated proteins that contribute to maintaining nuclear architecture and regulating gene expression. Lamina-associated polypeptide 2-like protein contains conserved coiled-coil and spectrin-repeat regions that enable interactions with nuclear envelope components and cytoskeletal elements. The LMNTD2 antibody supports detailed study of nuclear organization, mechanotransduction, and gene regulation processes mediated by the nuclear lamina.

Lamina-associated proteins link chromatin to the inner nuclear membrane and regulate nuclear stiffness, positioning, and transcriptional activity. Although the precise function of Lamina-associated polypeptide 2-like protein remains under characterization, studies suggest it participates in nuclear envelope remodeling during cell division and differentiation. The LMNTD2 antibody enables researchers to localize the protein in interphase nuclei and monitor its redistribution during mitosis, offering insights into how nuclear membrane components influence cell cycle progression.

LMNTD2 expression has been detected across multiple tissues, including brain, heart, and skeletal muscle, suggesting a structural role in maintaining nuclear integrity in mechanically active cells. The protein may interact with lamins (LMNA, LMNB1) and emerin to stabilize the nuclear lamina. Disruption of such interactions can alter chromatin organization and lead to nuclear shape abnormalities often associated with laminopathies and premature aging syndromes. The LMNTD2 antibody allows investigation of these interactions and potential implications in human disease.

Beyond structural maintenance, Lamina-associated polypeptide 2-like protein may influence transcriptional regulation by tethering specific genomic regions to the nuclear periphery. This positioning can repress or activate gene expression depending on chromatin context. The LMNTD2 antibody is valuable for examining spatial genome organization, nuclear compartmentalization, and mechanosensitive gene regulation, topics of growing interest in cell biology and epigenetics.

The LMNTD2 antibody is effective in immunofluorescence, western blotting, and immunohistochemistry, providing a clear nuclear envelope signal in cell-based assays. Its use helps identify structural changes in disease models, evaluate proteinÂ–protein interactions, and assess the impact of mechanical stress on nuclear organization. NSJ Bioreagents

provides the LMNTD2 antibody as a reliable and validated reagent for studies of nuclear envelope biology. Through consistent detection and quantification, this antibody supports research on how Lamina-associated polypeptide 2-like protein contributes to nuclear integrity, gene expression, and cellular mechanotransduction.

Application Notes

Optimal dilution of the LMNTD2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human LMNTD2 recombinant protein (Position: E155-A634) was used as the immunogen for the LMNTD2 antibody.

Storage

After reconstitution, the LMNTD2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.