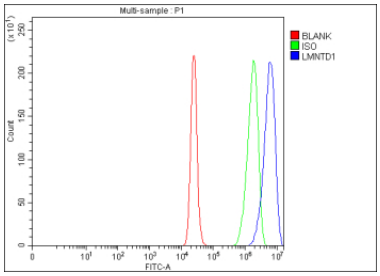
LMNTD1 Antibody / Lamin tail domain-containing protein 1 (FY12560)

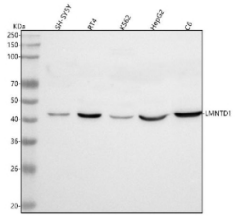
Catalog No.	Formulation	Size
FY12560	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

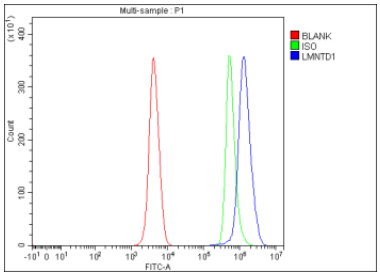
Availability	1-2 days
Species Reactivity	Human, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8N9Z9
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This LMNTD1 antibody is available for research use only.



Flow Cytometry analysis of RT4 cells using anti-LMNTD1 antibody. Overlay histogram showing RT4 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-LMNTD1 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 (Red line) was also used as a control.



Western blot analysis of LMNTD1 using anti-LMNTD1 antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: rat C6 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-LMNTD1 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 enhanced chemiluminescent. A specific band was detected for LMNTD1 at approximately 43 kDa. The expected molecular weight of LMNTD1 is ~43 kDa.



Flow Cytometry analysis of SH-SY5Y cells using anti-LMNTD1 antibody. Overlay histogram showing SH-SY5Y 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-LMNTD1 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 (Red line) was also used as a control.

Description

LMNTD1 antibody detects Lamin tail domain-containing protein 1, a poorly characterized nuclear envelope-associated protein believed to play roles in chromatin organization, nuclear structure, and cell differentiation. LMNTD1 is part of the broader family of lamin-associated proteins that contribute to the mechanical stability and spatial arrangement of the nucleus. The LMNTD1 antibody is used in studies of nuclear architecture, gene expression control, and tissue-specific nuclear envelope composition.

LMNTD1 is encoded by the LMNTD1 gene located on human chromosome 8p21.3. The protein is approximately 63 kilodaltons and characterized by a conserved lamin tail domain that mediates binding to lamins A/C and chromatin-associated factors. LMNTD1 localizes to the inner nuclear membrane, where it may anchor chromatin regions and participate in gene silencing through lamina-associated domains (LADs).

The LMNTD1 antibody detects a 63 kilodalton band in western blot analysis and shows nuclear rim staining under confocal microscopy. Although its function remains incompletely defined, LMNTD1 is proposed to stabilize nuclear structure during differentiation and respond to mechanical stress transmitted through the cytoskeleton. Expression studies indicate enrichment in testis, brain, and embryonic tissues, suggesting developmental and reproductive roles.

Emerging data suggest LMNTD1 interacts with components of the LINC (Linker of Nucleoskeleton and Cytoskeleton) complex, potentially influencing nuclear positioning and signal transduction. Altered LMNTD1 expression has been observed in certain cancers and developmental disorders, where disrupted nuclear architecture correlates with genomic instability and transcriptional dysregulation.

By linking nuclear lamina integrity with chromatin organization, LMNTD1 contributes to structural and functional compartmentalization of the nucleus. NSJ Bioreagents provides a validated LMNTD1 antibody optimized for western blot, flow cytometry, and nuclear envelope studies, facilitating research into nuclear mechanics, gene silencing, and developmental regulation.

Application Notes

Optimal dilution of the LMNTD1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human LMNTD1 recombinant protein (Position: Y48-E349) was used as the immunogen for the LMNTD1 antibody.

Storage

After reconstitution, the LMNTD1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.