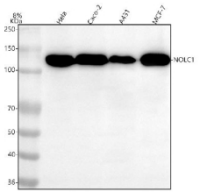
NOLC1 Antibody / Nucleolar and coiled-body phosphoprotein 1 / NOPP140 [clone 30N31] (FY12841)

Catalog No.	Formulation	Size
FY12841	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30N31
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q14978
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200 Immunocytochemistry/Immunofluorescence: 1:50-1:200
Limitations	This NOLC1 antibody is available for research use only.



Western blot analysis of NOLC1 using anti-NOLC1 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human CACO-2 whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human MCF-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-NOLC1 antibody at 1:500 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 1:500 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. NOLC1 western blot across human cell lines shows a predominant band at ~130 kDa. Although the predicted mass is ~74 kDa, NOLC1/Nopp140 is highly acidic and heavily phosphorylated, causing it to migrate markedly above its theoretical size on SDS-PAGE.

Description

NOLC1 antibody detects nucleolar and coiled-body phosphoprotein 1, encoded by the NOLC1 gene. This protein is also called NOPP140, nuclear phosphoprotein 140, and hNOPP140. NOLC1 is a nucleolar protein that shuttles between the nucleolus and cytoplasm, functioning as a phosphoprotein involved in ribosome biogenesis, rRNA transcription, and nucleolar organization. Structurally, NOLC1 contains multiple serine-rich regions that undergo phosphorylation, regulating its localization and interactions with RNA polymerase I and ribosomal proteins.

NOLC1 antibody is widely applied in cell biology, cancer research, and nucleolar studies. By detecting NOLC1, researchers can investigate how the nucleolus coordinates ribosome production and stress responses. The protein is highly expressed in proliferating cells, linking it to growth and transformation. Dysregulated NOLC1 expression has been reported in cancers, where nucleolar function is often enhanced to meet elevated translational demands.

Applications of NOLC1 antibody include western blotting, immunohistochemistry, immunofluorescence, and ELISA. Western blot assays detect phosphorylated and unphosphorylated isoforms, immunohistochemistry maps expression in tumors, and immunofluorescence highlights nucleolar localization and dynamics. These approaches provide powerful tools for studying nucleolar biology in health and disease.

NOLC1 interacts with RNA polymerase I transcription machinery, fibrillarin, and nucleolin, coordinating rRNA transcription and processing. It also functions in nucleolar stress responses, where its relocalization signals cellular stress or DNA damage. By applying NOLC1 antibody, scientists can study how nucleolar function integrates with signaling pathways in cancer, aging, and neurodegeneration.

NOLC1 mutations and expression changes contribute to oncogenesis. Overexpression correlates with tumor growth, while knockdown reduces proliferation. Because nucleolar size and activity are biomarkers of cancer, NOLC1 detection provides diagnostic and prognostic potential. NSJ Bioreagents offers NOLC1 antibody with validated specificity, ensuring reliable performance in nucleolar and cancer research.

Application Notes

Optimal dilution of the NOLC1 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human NOLC1 was used as the immunogen for the NOLC1 antibody.

Storage

Store the NOLC1 antibody at -20oC.

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