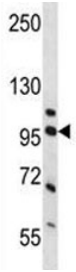
Nucleolar Protein Nucleolin Antibody for IF / NCL Immunofluorescence Antibody (F44030)

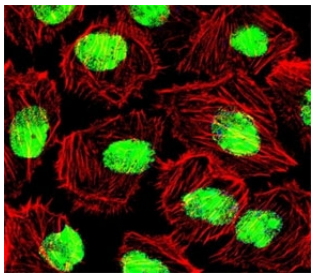
Catalog No.	Formulation	Size
F44030-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F44030-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Primate
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P19338
Applications	Western blot: 1:1000 Immunofluorescence: 1:10-1:50
Limitations	This NCL/Nucleolin antibody is available for research use only.



Western blot analysis of NCL and human placenta tissue lysate. Predicted molecular weight is 77 kDa, observed size is 100~110 kDa.



Nucleolar Protein Nucleolin Antibody for IF immunofluorescence analysis of human U251 cells. Fluorescent confocal image of U251 cells stained with Nucleolar Protein Nucleolin Antibody for IF at 1:25. Green fluorescence highlights nuclear Nucleolin / NCL immunoreactivity with prominent nucleolar enrichment, consistent with the known nuclear and nucleolar localization of this ribosome biogenesis protein, while the red counterstain outlines the filamentous actin cytoskeleton.

Description

Nucleolin (NCL) is a highly abundant nucleolar protein that plays a central role in ribosome biogenesis, ribosomal RNA processing, and nucleolar organization. The protein is encoded by the NCL gene on chromosome 2q37 and is widely expressed in proliferating cells where high levels of ribosome production are required. Nucleolin participates in transcription of ribosomal RNA genes, processing of pre-rRNA transcripts, and assembly of ribonucleoprotein complexes within the nucleolus. The Nucleolar Protein Nucleolin Antibody for IF is a rabbit polyclonal reagent developed to visualize nucleolin localization using immunofluorescence microscopy, supporting investigation of nucleolar structure and RNA regulatory pathways.

Nucleolin contains several functional domains that enable its diverse biological activities. The N-terminal acidic domain interacts with chromatin and nucleolar components involved in ribosomal RNA transcription. The central portion of the protein contains multiple RNA recognition motifs that bind ribosomal RNA and other RNA transcripts. A glycine- and arginine-rich C-terminal region facilitates interactions with nucleic acids and nucleolar proteins. Through these structural features, nucleolin helps coordinate ribosomal RNA synthesis, ribosome assembly, and nucleolar organization. Because nucleolin accumulates prominently within nucleoli, a well-characterized NCL Immunofluorescence Antibody is commonly used to visualize nucleolar compartments and assess nucleolar integrity during cellular stress or cell cycle progression.

NCL antibody reagents are frequently described in the literature using several established synonyms for the protein. NCL antibody, also known as nucleolin antibody, C23 nucleolin antibody, and nucleolin nucleolar phosphoprotein antibody, recognizes a major nucleolar phosphoprotein originally identified in nucleolar protein fractionation studies. The C23 designation derives from early biochemical characterization in which nucleolin was classified as a prominent nucleolar phosphoprotein associated with ribosomal RNA transcription complexes. These alternative names remain widely used in research focused on nucleolar biology and ribosome synthesis.

Nucleolin is dynamically distributed within cells and can shuttle between the nucleolus, nucleoplasm, and cytoplasm depending on cellular conditions. In rapidly dividing cells, nucleolin levels are typically elevated to support increased ribosome production and protein synthesis. Elevated expression of nucleolin is frequently observed in tumor cells and other proliferative tissues, where it contributes to enhanced ribosomal RNA transcription and regulation of RNA stability. In certain contexts nucleolin has also been detected at the cell surface, where it can participate in ligand binding and signaling pathways linked to cell growth and angiogenesis.

In addition to its role in ribosome biogenesis, nucleolin participates in regulation of DNA replication, chromatin remodeling, and RNA transport. The protein interacts with histones, transcription factors, and RNA-binding proteins to coordinate nucleolar activity with broader nuclear regulatory processes. These interactions allow nucleolin to influence gene expression programs and cellular stress responses, particularly during conditions that disrupt nucleolar function.

Because nucleolin displays a characteristic nucleolar enrichment and punctate nuclear fluorescence pattern, antibodies targeting NCL are widely used as markers of nucleolar compartments in microscopy studies. A rabbit polyclonal Nucleolar Protein Nucleolin Antibody for IF can therefore support immunofluorescence analysis of nucleolar organization, investigation of nucleolar stress responses, and visualization of nucleolin redistribution during cell cycle progression or cellular stress.

For an alternative monoclonal antibody targeting this nucleolar protein, see our Nucleolin Antibody NCL/902, validated for western blot, immunohistochemistry, immunofluorescence, and flow cytometry.

Application Notes

Titration of the Nucleolar Protein Nucleolin Antibody for IF may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 276-304 from the human protein was used as the immunogen for this NCL antibody.

Storage

Aliquot the NCL/Nucleolin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

NCL antibody, nucleolin antibody, C23 nucleolin antibody, nucleolin nucleolar phosphoprotein antibody

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