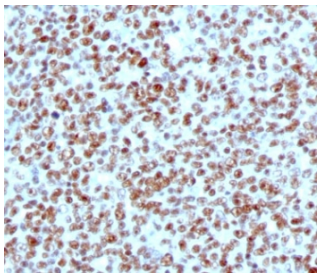
C23/Nucleolin Antibody for IF / Nucleolin Immunofluorescence Antibody [clone NPC23-2] (V7196)

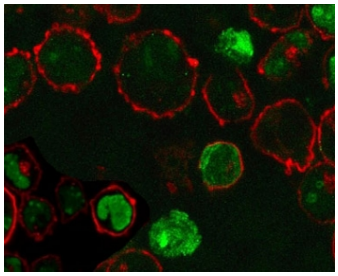
Catalog No.	Formulation	Size
V7196-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7196-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7196SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7196IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

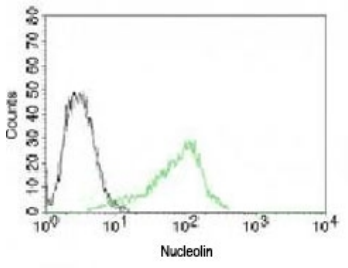
Availability	1-3 business days
Species Reactivity	Human, Mouse; Other species not known.
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	NPC23-2
Purity	Protein G affinity chromatography
UniProt	P19338
Localization	Nucleoli
Applications	Immunofluorescence : 1-2ug/ml Flow Cytometry : 1-2ug/million cells in 0.1ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Prediluted IHC Only Format : incubate for 30 min at RT (1)
Limitations	This Nucleolin antibody is available for research use only.



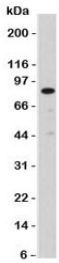
C23/Nucleolin Antibody immunohistochemistry analysis of human tonsil. IHC testing of FFPE human tonsil with C23/Nucleolin Antibody (clone NPC23-2). HRP-DAB brown chromogenic staining highlights nuclei of lymphoid cells within tonsillar tissue, consistent with the nuclear and nucleolar localization of Nucleolin / NCL in proliferating immune cell populations. FFPE testing requires sections to be boiled in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes, followed by cooling at RT for 20 minutes prior to staining.



C23/Nucleolin Antibody for IF immunofluorescence analysis of human K562 cells. Immunofluorescent staining of PFA-fixed human K562 cells with C23/Nucleolin Antibody for IF (clone NPC23-2). Green fluorescence highlights nucleolin-positive nucleoli within the nuclei, consistent with the known nucleolar localization of Nucleolin / NCL, while Phalloidin (red) labels filamentous actin outlining the cell cytoskeleton and cell boundaries.



Flow cytometry testing of human 293 cells with isotype control and Alexa Fluor 488-labeled C23/Nucleolin Antibody (green, clone NPC23-2).



Western blot testing of Nucleolin antibody (clone NPC23-2) and A431 lysate. Predicted molecular weight ~77 kDa.

Description

Nucleolin (NCL) is a multifunctional nucleolar protein that plays a major role in ribosomal RNA transcription, ribosome assembly, and nucleolar organization. Encoded by the NCL gene on chromosome 2q37, nucleolin is one of the most abundant proteins present within the nucleolus of actively proliferating cells. It participates in ribosomal RNA processing, chromatin remodeling, and RNA stabilization, making it a central regulator of nucleolar activity and cellular growth. The C23/Nucleolin Antibody for IF clone NPC23-2 is a mouse monoclonal reagent developed for visualization of nucleolin localization using immunofluorescence microscopy, enabling researchers to examine nucleolar structure and RNA regulatory pathways.

Nucleolin contains multiple structural elements that enable its diverse biological functions. The N-terminal region is acidic and participates in chromatin interactions, while the central portion contains several RNA recognition motifs responsible for binding ribosomal RNA and other transcripts. A glycine- and arginine-rich C-terminal domain promotes interactions with nucleic acids and nucleolar proteins. Through these domains, nucleolin coordinates ribosomal RNA transcription, processing, and ribonucleoprotein complex formation. Because nucleolin accumulates prominently within nucleoli, a well-characterized Nucleolin Immunofluorescence Antibody is commonly used to visualize nucleolar compartments and evaluate nucleolar architecture during different cellular states.

C23 antibody reagents recognize nucleolin through one of its most widely used historical names. C23/Nucleolin antibody, also described in the literature as NCL antibody and nucleolar protein nucleolin antibody, detects a nucleolar phosphoprotein originally identified during early nucleolar protein fractionation experiments. In these studies nucleolin was designated C23 based on its electrophoretic migration pattern, and this terminology continues to appear frequently in ribosome biogenesis and nucleolar organization research. These synonyms remain widely used in studies of nucleolar dynamics and RNA processing.

Nucleolin is dynamically distributed within cells and can shuttle between the nucleolus, nucleoplasm, cytoplasm, and in some circumstances the cell surface. Its expression is closely associated with cellular proliferation, as actively dividing cells require increased ribosome production to support protein synthesis. Elevated levels of nucleolin are frequently observed in tumor cells and rapidly growing tissues, where the protein contributes to enhanced ribosomal RNA transcription and translational capacity. Surface-localized nucleolin has also been reported in certain tumor and endothelial cell types, where it may interact with extracellular ligands involved in growth signaling.

Beyond ribosome biogenesis, nucleolin also participates in regulation of DNA replication, chromatin organization, and RNA transport. The protein interacts with histones, transcription factors, and RNA-binding complexes to coordinate nucleolar function with broader nuclear processes. These activities allow nucleolin to influence gene expression and cellular stress responses, particularly during conditions that disrupt nucleolar integrity.

Because nucleolin exhibits a strong nucleolar enrichment and produces a characteristic punctate nuclear fluorescence pattern, antibodies targeting this protein are widely used as markers of nucleolar compartments in microscopy studies. A mouse monoclonal C23/Nucleolin Antibody for IF such as clone NPC23-2 can support visualization of nucleolar organization, analysis of nucleolar stress responses, and investigation of nucleolin redistribution during cell cycle progression or cellular stress.

Application Notes

Titering of the C23/Nucleolin Antibody for IF may be required for optimal performance.
1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human protein was used as the immunogen for the C23/Nucleolin Antibody.

Storage

Store the C23/Nucleolin Antibody antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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