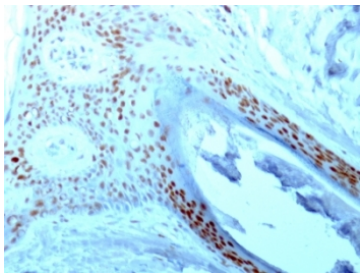
NCL Antibody for IF / Nucleolin Immunofluorescence Antibody [clone 364-5] (V2757)

Catalog No.	Formulation	Size
V2757-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2757-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2757SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2757IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

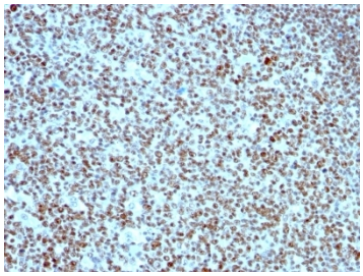
Citations (1)

Bulk quote request

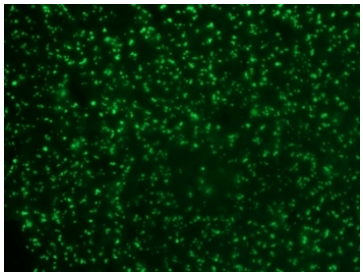
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	364-5
Purity	Protein G affinity chromatography
UniProt	P19338
Localization	Nucleoli
Applications	Flow cytometry: 0.5-1ug/million cells Immunofluorescence: 0.5-1ug/ml Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.25-0.5ug/ml for 30 min at RT
Limitations	This NCL/Nucleolin antibody is available for research use only.



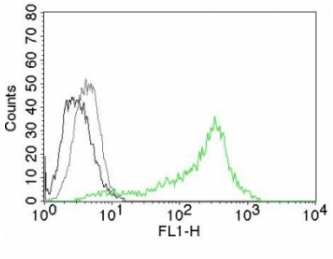
NCL Antibody immunohistochemistry analysis of human skin. Formalin-fixed paraffin-embedded human skin stained with NCL Antibody (clone 364-5). HRP-DAB brown chromogenic staining highlights nuclei of epidermal epithelial cells, consistent with the expected nuclear and nucleolar localization of Nucleolin / NCL.



NCL Antibody immunohistochemistry analysis of human tonsil. Formalin-fixed paraffin-embedded human tonsil stained with NCL Antibody (clone 364-5). HRP-DAB brown chromogenic staining highlights nuclei of lymphoid cells within tonsillar tissue, consistent with the nuclear and nucleolar localization of Nucleolin / NCL. Staining of formalin-fixed tissues is enhanced by boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at RT for 20 minutes.



NCL Antibody for IF - Immunofluorescence analysis of human colon carcinoma tissue. Formalin-fixed paraffin-embedded human colon carcinoma stained with AF488 conjugate of NCL Antibody for IF (clone 364-5). The mouse monoclonal antibody highlights nucleolin-positive nuclei and nucleolar compartments consistent with the expected nuclear localization of Nucleolin / NCL. Green fluorescence marks NCL-positive tumor cell nuclei. Antigen retrieval was performed by boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at RT for 20 minutes prior to staining.



Flow cytometry testing of 293T cells. Black: cells alone; Grey: isotype control; Green: AF488-labeled NCL antibody (364-5).

Description

Nucleolin (NCL) is a highly conserved nucleolar protein that functions as a central regulator of ribosomal RNA synthesis, ribosome assembly, and nucleolar organization. The protein is encoded by the NCL gene on chromosome 2q37 and is one of the most abundant phosphoproteins present in the nucleolus of actively proliferating cells. Nucleolin participates in the transcription and processing of ribosomal RNA, stabilization of specific messenger RNAs, and regulation of chromatin architecture. The NCL Antibody for IF clone 364-5 is a mouse monoclonal reagent developed for visualization of nucleolin localization by immunofluorescence microscopy, enabling investigation of nucleolar structure and RNA regulatory processes.

Nucleolin contains several structural domains that support its multifunctional roles in nucleic acid metabolism. These include an acidic N-terminal domain involved in chromatin interactions, four RNA recognition motifs responsible for binding ribosomal RNA and other transcripts, and a glycine- and arginine-rich C-terminal region that facilitates protein-protein interactions. Through these domains, nucleolin coordinates multiple steps of ribosome production and contributes to the structural organization of nucleoli. Because of its nucleolar enrichment and characteristic punctate nuclear pattern, a well-characterized Nucleolin Immunofluorescence Antibody can be used to monitor nucleolar morphology and changes in nucleolar integrity during cellular stress or cell cycle progression.

NCL antibody reagents are frequently described in the literature using several established aliases for the protein. NCL antibody, also known as nucleolin antibody, C23 antibody, and nucleolar protein NCL antibody, recognizes a protein historically described as nucleolin nucleolar phosphoprotein. The C23 name originates from early nucleolar fractionation studies in which nucleolin was identified as a prominent nucleolar phosphoprotein associated with ribosomal transcription complexes. These historical designations remain common in studies of nucleolar biology, RNA processing, and cancer cell proliferation.

Nucleolin exhibits dynamic intracellular trafficking and can shuttle between the nucleolus, nucleoplasm, cytoplasm, and in some conditions the cell surface. In proliferating and transformed cells, nucleolin levels are often elevated and correlate with increased ribosome production and enhanced protein synthesis. Surface-localized nucleolin has also been reported in tumor cells and activated endothelial cells, where it participates in ligand binding and signaling pathways linked to cell growth and angiogenesis. These functions make nucleolin an important subject of investigation in cancer biology and nucleolar stress responses.

The protein also contributes to regulation of DNA replication and chromatin remodeling through interactions with histones, transcription factors, and RNA-binding complexes. By coordinating ribosomal RNA transcription with ribosome assembly, nucleolin helps ensure efficient protein synthesis in rapidly dividing cells. Alterations in nucleolin localization or expression are therefore frequently associated with tumor progression and cellular stress responses.

Because nucleolin accumulates strongly within nucleoli and displays a distinctive nuclear distribution pattern, antibodies targeting NCL are widely used as markers of nucleolar compartments in cell imaging experiments. A mouse monoclonal NCL Antibody for IF such as clone 364-5 can support immunofluorescence analysis of nucleolar organization, assessment of nucleolar disruption following drug treatment, and visualization of nucleolin redistribution during cellular stress or apoptosis.

Application Notes

Optimal dilution of the NCL Antibody for IF should be determined by the researcher.

1.

Immunogen

SUDHL1 cell nuclear lysate was used as the immunogen for the NCL/Nucleolin antibody.

Storage

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

Alternate Names

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

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