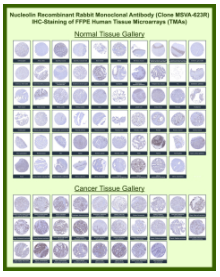
Nucleolin Antibody for IHC / NCL Immunohistochemistry Antibody [clone MSVA-623R] (V6101)

Catalog No.	Formulation	Size
V6101-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6101-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-623R
UniProt	P19338
Localization	Cytoplasm, Nucleolus, Nucleus
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This NCL/Nucleolin antibody is available for research use only.



Nucleolin Antibody for IHC immunohistochemistry analysis of human tissue microarrays. Recombinant rabbit monoclonal Nucleolin Antibody for IHC (clone MSVA-623R) was used to stain formalin-fixed paraffin-embedded human normal and cancer tissue microarrays. HRP-DAB brown chromogenic staining highlights nuclear expression of Nucleolin / NCL across multiple tissue types, consistent with the known nuclear and nucleolar localization of this ribosome biogenesis protein. The observed staining patterns across normal and tumor tissues align with reported expression profiles from the Human Protein Atlas.

Description

Nucleolin (NCL) is a multifunctional nucleolar phosphoprotein involved in ribosome biogenesis, ribosomal RNA transcription, and regulation of nucleolar structure. The protein is encoded by the NCL gene on chromosome 2q37 and is strongly expressed in proliferating cells where ribosome production is active. The Nucleolin Antibody for IHC clone MSVA-623R is a recombinant rabbit monoclonal antibody developed for immunohistochemistry detection of nucleolin in formalin-fixed paraffin-embedded tissue sections.

Nucleolin is primarily localized to the nucleus and nucleolus, where it participates in ribosomal RNA synthesis and ribonucleoprotein complex assembly. In immunohistochemistry staining, NCL antibodies typically produce strong nuclear staining with nucleolar enrichment in cells that are actively engaged in protein synthesis. This nuclear localization pattern allows Nucleolin Antibody for IHC reagents to clearly highlight proliferative epithelial cells, lymphoid cells, and other metabolically active cell populations within tissue sections.

Immunohistochemistry analysis of NCL expression is commonly performed on formalin-fixed paraffin-embedded tissues to evaluate nucleolin distribution across different organs and tumor types. Nuclear staining patterns can be readily visualized in tissue microarrays and surgical pathology specimens, allowing researchers to examine nucleolin expression in both normal and malignant tissues. Because nucleolin expression correlates with cellular proliferation and nucleolar activity, immunohistochemistry staining frequently reveals increased nuclear signal in rapidly dividing tumor cells.

Nucleolin contains several structural domains that support its diverse biological functions. The N-terminal acidic domain interacts with chromatin and ribosomal RNA transcription complexes. Four RNA recognition motifs in the central region bind ribosomal RNA and other RNA molecules, while the glycine- and arginine-rich C-terminal domain mediates interactions with nucleic acids and nucleolar proteins. Through these structural regions nucleolin coordinates ribosomal RNA transcription, RNA processing, and ribonucleoprotein assembly, processes that are tightly linked to cell growth and protein synthesis.

NCL antibody reagents are commonly referenced in the literature using several established synonyms for the protein. NCL antibody, nucleolin antibody, C23 nucleolin antibody, and nucleolar protein nucleolin antibody all refer to the same nucleolar phosphoprotein originally described during nucleolar protein fractionation experiments. The historical C23 designation remains widely used in studies examining ribosome biogenesis and nucleolar organization.

Because nucleolin displays a characteristic nuclear and nucleolar staining pattern in tissue sections, antibodies targeting NCL are widely used in immunohistochemistry studies of tissue microarrays, tumor samples, and normal organs. A recombinant rabbit monoclonal Nucleolin Antibody for IHC such as clone MSVA-623R provides a reliable reagent for visualizing nucleolin expression in FFPE tissues and for examining nuclear nucleolin distribution across diverse human tissue types.

Application Notes

1. Optimal dilution of the Nucleolin Antibody for IHC should be determined by the researcher.

2. This NCL/Nucleolin antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human NCL protein was used as the immuongen for the NCL/Nucleolin antibody.

Storage

NCL/Nucleolin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

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