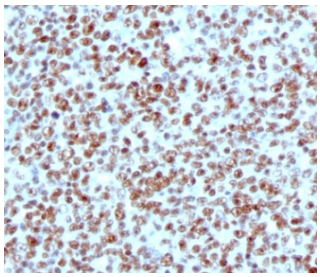
Nucleolin Antibody [clone NPC23-2] (V7196)

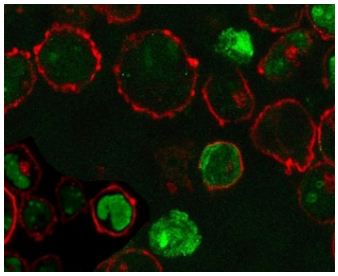
Catalog No.	Formulation	Size
V7196-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7196-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7196SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7196IHC-7ML	Prediluted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

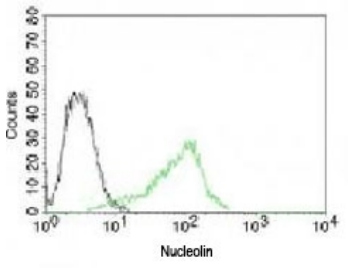
Availability	1-3 business days
Species Reactivity	Human, Mouse; Other species not known.
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	NPC23-2
Purity	Protein G affinity chromatography
UniProt	P19338
Localization	Nucleoli
Applications	Immunofluorescence : 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.



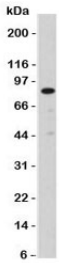
IHC testing of FFPE human tonsil with Nucleolin antibody (clone NPC23-2). FFPE testing requires sections to be boiled in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes, followed by cooling at RT for 20 minutes, prior to staining.



Immunofluorescent staining of PFA-fixed human K562 cells with Nucleolin antibody (green, clone NPC23-2) and Phalloidin (red).



Flow cytometry testing of human 293 cells with isotype control and Alexa Fluor 488-labeled 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 antibody (clone NPC23-2) detects Nucleolin (NCL), a multifunctional phosphoprotein that plays key roles in ribosome biogenesis, chromatin organization, and nucleocytoplasmic transport. The UniProt recommended name is Nucleolin (NCL). This abundant nuclear phosphoprotein is localized primarily in the nucleolus, where it binds pre-ribosomal RNA and participates in the synthesis and assembly of ribosomal subunits. Nucleolin is among the most highly expressed non-ribosomal proteins in the nucleus, especially in rapidly dividing or tumorigenic cells.

Functionally, Nucleolin antibody (clone NPC23-2) recognizes a 77 kDa RNA-binding protein that shuttles between the nucleus and cytoplasm. It contains multiple RNA recognition motifs (RRMs) and an acidic N-terminal domain that interacts with histones and transcriptional regulators. Through its glycine/arginine-rich C-terminal region, Nucleolin contributes to rRNA maturation, stabilization of mRNAs, and control of translation efficiency. Although predominantly nucleolar, Nucleolin can also translocate to the cell surface in certain conditions, mediating receptor-ligand interactions and signaling events.

The NCL gene is located on chromosome 2q37.1 and produces several isoforms through alternative splicing and post-translational modifications. Phosphorylation and methylation of Nucleolin modulate its localization and RNA-binding capacity. Expression of Nucleolin is closely linked to cellular proliferation, stress response, and oncogenic transformation.

Phosphorylation by casein kinase II and cdc2 kinase controls its nucleolar retention and activity during cell cycle progression.

Clone NPC23-2 has been optimized for high specificity and strong detection of Nucleolin in nuclear and nucleolar compartments. It provides clear detection of both endogenous and overexpressed Nucleolin, supporting applications in cell cycle, cancer, and nucleolar biology research. The antibody effectively identifies Nucleolin expression in transformed cells, tumor biopsies, and proliferative tissues, where Nucleolin acts as a marker of ribosome production and metabolic activity.

Nucleolin functions in a wide range of cellular processes including chromatin remodeling, mRNA stabilization, and DNA damage repair. It interacts with key regulators such as p53, BCL2, and telomerase to influence gene expression and genome stability. Additionally, Nucleolin participates in stress adaptation and apoptosis signaling, shuttling between compartments in response to UV, oxidative, or viral stress. Nucleolin also modulates signaling cascades such as MAPK and PI3K-Akt and serves as a receptor or cofactor for several pathogens including HIV-1 and SARS-CoV-2.

Nucleolin antibody (clone NPC23-2) is suitable for detecting Nucleolin expression in cell culture and tissue samples, providing high sensitivity for nuclear and nucleolar localization studies. Its robust signal makes it valuable in immunohistochemical and biochemical analyses of ribosome biogenesis, cancer progression, and nucleolar stress pathways. NSJ Bioreagents supplies Nucleolin antibody (clone NPC23-2) reagents validated for use in relevant research applications, supporting investigations into RNA metabolism, chromatin regulation, and oncogenic transformation.

Application Notes

Titering of the Nucleolin antibody 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 Nucleolin antibody.

Storage

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