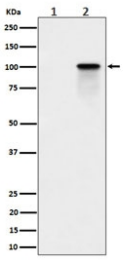
Phospho-Nucleolin Antibody (pT84) [clone 29N17] (RQ8681)

Catalog No.	Formulation	Size
RQ8681	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29N17
Purity	Affinity chromatography
UniProt	P19338
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-Nucleolin antibody is available for research use only.



Phospho-Nucleolin Antibody (pT84) western blot analysis of human K562 cells. Lane 1: human K562 cell lysate untreated, Lane 2: human K562 cell lysate treated with Calyculin A. A band is detected at approximately 100 kDa in the treated sample, consistent with the predicted molecular weight of Nucleolin / NCL. Increased signal following Calyculin A treatment supports detection of Nucleolin phosphorylated at Thr84.

Description

Nucleolin (NCL) is a highly abundant nucleolar protein that functions as a key regulator of ribosome biogenesis, ribosomal RNA processing, and nucleolar architecture. The protein is encoded by the NCL gene on chromosome 2q37 and is strongly expressed in proliferating cells that require elevated ribosome production. Nucleolin participates in transcription of ribosomal RNA genes, processing of precursor rRNA transcripts, and assembly of ribonucleoprotein complexes required for ribosome formation. Regulation of nucleolin activity occurs through multiple post-translational modifications, including phosphorylation at specific threonine and serine residues. The Phospho-Nucleolin Antibody (pT84) clone 29N17

detects nucleolin phosphorylated at threonine 84, allowing investigation of signaling pathways that regulate nucleolar protein function.

Phosphorylation of nucleolin is frequently associated with activation of kinase signaling pathways that influence cell growth, stress responses, and nucleolar dynamics. Modification of NCL at Thr84 has been reported to occur within regulatory regions of the protein that control interactions with RNA-binding complexes and nucleolar proteins. Changes in nucleolin phosphorylation status can influence ribosomal RNA transcription and ribosome assembly, processes that are tightly linked to cellular proliferation and metabolic activity.

Nucleolin contains several structural elements that support its diverse biological functions. The N-terminal domain interacts with chromatin and transcription complexes involved in ribosomal RNA synthesis. Four RNA recognition motifs in the central region bind ribosomal RNA and other transcripts, while the glycine- and arginine-rich C-terminal domain mediates interactions with nucleolar proteins and ribonucleoprotein complexes. Phosphorylation events such as Thr84 modification can regulate nucleolin's interactions with these molecular partners and contribute to nucleolar remodeling during cellular signaling events.

NCL antibody reagents are commonly referenced in the literature using several widely recognized 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 common in studies of ribosome biogenesis and nucleolar structure.

Altered nucleolin phosphorylation has been associated with cellular transformation, tumor growth, and responses to cellular stress. Because phosphorylation-specific antibodies selectively recognize modified nucleolin, a phospho-Thr84 NCL antibody enables detection of signaling-dependent changes in nucleolin regulation. Such reagents can support studies investigating nucleolar signaling pathways, regulation of ribosome synthesis, and the role of nucleolin phosphorylation in cancer and cell cycle control.

Application Notes

Optimal dilution of the Phospho-Nucleolin antibody (pT84) should be determined by the researcher.

Immunogen

A synthetic peptide specific to the region of human Nucleolin protein surrounding phosphorylated threonine 84 was used as the immunogen for the Phospho-Nucleolin antibody (pT84).

Storage

Store the Phospho-Nucleolin antibody at -20oC.

Alternate Names

phospho nucleolin antibody, NCL phospho Thr84 antibody, nucleolin pT84 antibody, phospho NCL T84 antibody

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