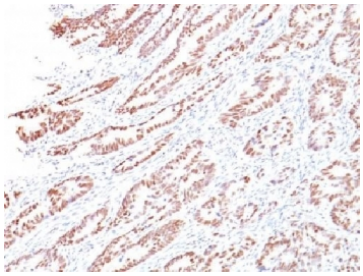
Rb Antibody 1F8 / Retinoblastoma Monoclonal Antibody [clone 1F8] (V3218)

Catalog No.	Formulation	Size
V3218-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3218-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3218SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

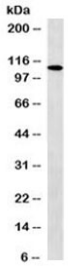
Citations (23)

Bulk quote request

Species Reactivity	Human, Mouse
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	1F8
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P06400
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunoprecipitation: 1-2ug/500ug protein lysate Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Rb Antibody 1F8 / Retinoblastoma Monoclonal Antibody is available for research use only.



Rb Antibody 1F8 IHC in Human Colon. Immunohistochemical staining of human colon tissue using the Retinoblastoma Monoclonal Antibody clone 1F8. Brown DAB staining is observed predominantly in the nuclei of colonic epithelial cells, particularly within the intestinal glands, with comparatively limited staining of the surrounding stromal tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM citrate buffer (pH 6.0) for 10-20 minutes, followed by cooling at room temperature for 20 minutes.



Rb Antibody 1F8 WB in Human A431 Nuclear Extract. Western blot analysis of the nuclear fraction of human A431 cell lysate using the Retinoblastoma Monoclonal Antibody clone 1F8. A distinct band is detected at approximately 106 kDa, consistent with the expected molecular weight of retinoblastoma protein (RB1).

Description

Rb Antibody 1F8 / Retinoblastoma Monoclonal Antibody recognizes retinoblastoma protein, a nuclear phosphoprotein encoded by the RB1 gene that functions as a major regulator of cell cycle progression. Commonly called pRb, this protein was the first tumor suppressor identified through the study of hereditary retinoblastoma. Its central function is to coordinate cellular proliferation with growth signals by controlling the activity of transcription factors required for DNA synthesis. RB1 belongs to the pocket protein family, which also includes RBL1 and RBL2, and contains conserved domains that mediate interactions with numerous regulatory proteins.

The relationship between RB1 and E2F transcription factors is fundamental to cell cycle control. In its growth-suppressive state, RB1 binds E2F proteins and restricts transcription of genes required for progression into S phase. Growth-promoting signals activate cyclin-dependent kinases that phosphorylate RB1, changing its interactions with E2F and permitting the expression of DNA replication machinery. This regulatory mechanism establishes a connection between extracellular mitogenic stimulation and the intracellular commitment to cell division. Disruption of this control can allow cells to proliferate despite signals that would normally maintain growth arrest.

RB1 also contributes to differentiation and the maintenance of specialized cellular states. Through interactions with chromatin-associated proteins and transcriptional regulators, it participates in establishing gene expression programs that support tissue maturation. RB1 activity is additionally associated with cellular senescence, a durable form of growth arrest that can limit the expansion of damaged or potentially oncogenic cells. Its involvement in chromosome stability and chromatin organization further connects cell cycle regulation with the preservation of genomic integrity.

Loss of RB1 function occurs in numerous malignancies, including retinoblastoma, osteosarcoma, and small cell lung cancer. In other tumors, the pathway may be functionally disrupted through alterations in cyclins, CDK4/6, or CDK inhibitors. Because RB1 activity depends on phosphorylation and its interactions with regulatory proteins, changes in protein abundance do not always correspond directly to changes in tumor suppressor function. NSJ Bioreagents offers this Rb Antibody 1F8 for investigating retinoblastoma protein expression, cell cycle regulation, and the molecular consequences of RB pathway disruption.

Explore our Retinoblastoma Antibody FCD-18, a rabbit monoclonal antibody targeting RB1, for an additional option with Western blot, immunohistochemistry, and immunofluorescence validation.

Application Notes

Titering of the Rb Antibody 1F8 / Retinoblastoma Monoclonal Antibody may be required for optimal performance.

Immunogen

A human recombinant partial protein was used as the immunogen for this Rb antibody. The epitope is localized within amino acids 703-772.

Storage

The Rb antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

RB1 protein antibody, Retinoblastoma-associated protein antibody, RB transcriptional corepressor 1 antibody, p105-Rb antibody, Retinoblastoma tumor suppressor antibody

Copyright © NSJ Bioreagents. All rights reserved.