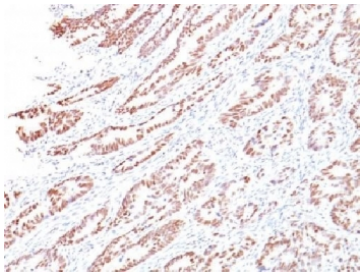
Rb Antibody / Retinoblastoma [clone 1F8] (V3218)

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

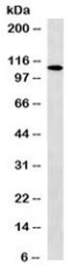
Citations (23)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
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 is available for research use only.



IHC testing of human colon with Rb antibody (clone 1F8). Required HIER: boil tissue sections in 10mM citrate buffer, pH 6, for 10-20 min followed by cooling at RT for 20 min.



Western blot testing of human A431 cell lysate (nuclear fraction) with Rb antibody (clone 1F8). Expected molecular weight ~106 kDa.

Description

Rb antibody is used to study the retinoblastoma protein, a nuclear phosphoprotein that functions as a key regulator of the cell cycle. Encoded by the RB1 gene, Rb is best known for its role in controlling progression through the G1 to S phase transition. By binding to E2F transcription factors, Rb prevents inappropriate DNA replication and ensures cells divide only when conditions are appropriate. The discovery of Rb represented a milestone in cancer biology, establishing it as the first identified tumor suppressor protein.

The retinoblastoma protein exerts control over cell proliferation by integrating signals from cyclin dependent kinases and growth factor pathways. When hypophosphorylated, Rb binds tightly to E2F and represses transcription of genes required for S phase entry. Upon phosphorylation, Rb releases E2F, allowing the transcription of DNA replication genes. Loss or inactivation of Rb disrupts this checkpoint, leading to uncontrolled proliferation and contributing to tumorigenesis.

The Rb antibody clone 1F8 has proven valuable in research aimed at detecting retinoblastoma protein across tissues and experimental systems. Clone 1F8 specifically recognizes epitopes of Rb, providing dependable detection for evaluating expression and subcellular localization. It has been widely adopted in cancer studies where Rb loss or dysfunction is a hallmark of many tumors. In developmental biology, the antibody helps define the role of Rb in cellular differentiation and tissue homeostasis.

In oncology, Rb status is often assessed to classify tumor subtypes and to guide therapeutic approaches. Alterations in Rb are observed in retinoblastoma, osteosarcoma, small cell lung carcinoma, and many other malignancies. Beyond cancer, Rb has been implicated in neuronal development, senescence, and regulation of stem cell fate. Its broad biological impact underscores why Rb continues to be a central focus of cellular biology research.

NSJ Bioreagents supplies this Rb antibody to support research into cell cycle regulation and cancer biology. Scientists working with this reagent gain a reliable tool for analyzing one of the most pivotal tumor suppressor proteins discovered to date. Alternate terms for this protein include retinoblastoma protein antibody, RB1 antibody, pp110 antibody, and RB transcriptional corepressor 1 antibody, which reflect the different contexts in which it is studied.

Application Notes

Titering of the Rb 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.