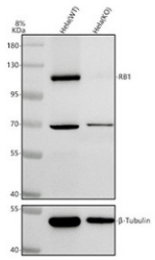
Retinoblastoma Antibody FCD-18 / RB1 Monoclonal Antibody [clone FCD-18] (RQ5141)

Catalog No.	Formulation	Size
RQ5141	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

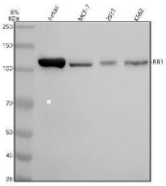
Recombinant RABBIT MONOCLONAL

Bulk quote request

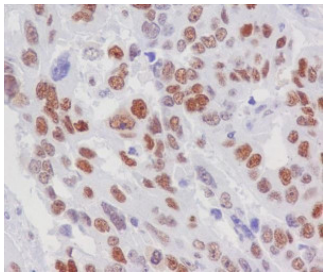
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	FCD-18
Purity	Affinity purified
UniProt	P06400
Applications	Western blot: 1:500-1:1000 Immunohistochemistry (FFPE): 1:250 Immunofluorescence: 1:50
Limitations	This Retinoblastoma Antibody FCD-18 / RB1 Monoclonal Antibody is available for research use only.



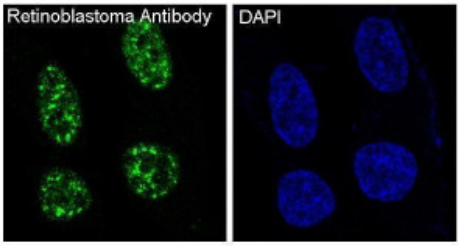
Retinoblastoma Antibody FCD-18 WB with RB1 Knockout Validation in HeLa Cells. Western blot analysis of wild-type (WT) and RB1 knockout (KO) human HeLa whole cell lysates using the RB1 Monoclonal Antibody clone FCD-18 at 1:500. Samples containing 30 ug of total protein per lane were separated by 8% SDS-PAGE under reducing conditions. A prominent band at approximately 106 kDa is detected in WT cells but is absent in RB1 KO cells, supporting target-specific detection. Beta-tubulin was used as a loading control.



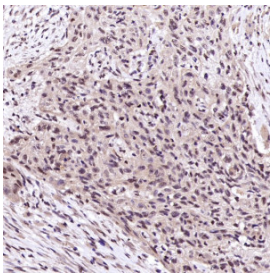
Retinoblastoma Antibody FCD-18 WB in Human Cell Lines. Western blot analysis of human Jurkat (lane 1), MCF-7 (lane 2), 293T (lane 3), and K562 (lane 4) whole cell lysates using the RB1 Monoclonal Antibody clone FCD-18 at 1:1000. Samples containing 30 ug of total protein per lane were separated by 5-20% SDS-PAGE under reducing conditions. A band is detected at approximately 106 kDa across the tested samples, consistent with the expected molecular weight of RB1.



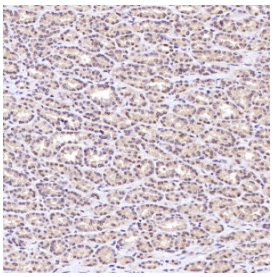
Retinoblastoma Antibody FCD-18 IHC in Human Lung Cancer. Immunohistochemical staining of FFPE human lung cancer tissue using the RB1 Monoclonal Antibody clone FCD-18. Strong brown DAB staining is observed predominantly in the nuclei of numerous tumor cells, with variable staining intensity among individual cells. The surrounding cytoplasm shows comparatively limited labeling.



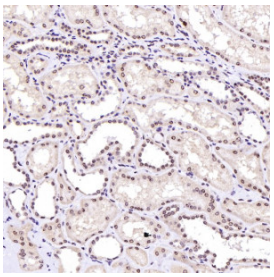
Retinoblastoma Antibody FCD-18 IF in Human SH-SY5Y Cells. Immunofluorescence staining of human SH-SY5Y cells using the RB1 Monoclonal Antibody clone FCD-18 (green), with DAPI nuclear counterstaining (blue). RB1 immunoreactivity appears as punctate and granular green fluorescence concentrated within the nuclear regions, consistent with the established nuclear localization of retinoblastoma protein.



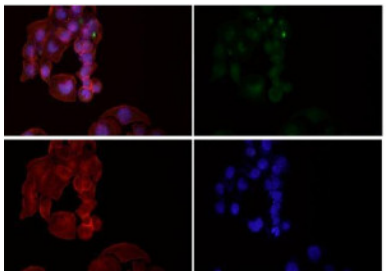
Retinoblastoma Antibody FCD-18 IHC in Human Tongue Cancer. Immunohistochemical staining of FFPE human tongue cancer tissue using the RB1 Monoclonal Antibody clone FCD-18 at 1:250. Brown DAB staining is visible in subsets of tumor cell nuclei, with variable staining intensity throughout the tissue. Hematoxylin counterstaining highlights the surrounding nuclear architecture.



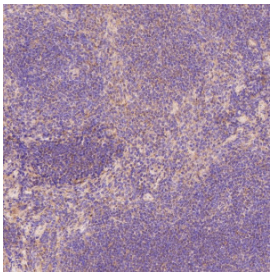
Retinoblastoma Antibody FCD-18 IHC in Human Renal Cancer. Immunohistochemical staining of FFPE human renal cancer tissue using the RB1 Monoclonal Antibody clone FCD-18 at 1:250. Brown DAB staining is distributed throughout the tumor tissue, with labeling visible in cytoplasmic and perinuclear regions of numerous cells. Nuclear counterstaining is provided by hematoxylin.



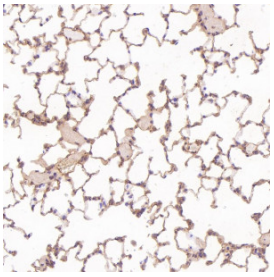
Retinoblastoma Antibody FCD-18 IHC in Human Kidney. Immunohistochemical staining of FFPE human kidney tissue using the RB1 Monoclonal Antibody clone FCD-18 at 1:1000. Brown DAB staining is observed primarily in renal tubular epithelial cells, with variable cytoplasmic and nuclear labeling. Glomerular and surrounding interstitial structures show comparatively limited staining.



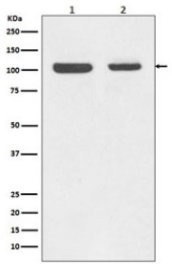
Retinoblastoma Antibody FCD-18 IF in Human HeLa Cells. Immunofluorescence analysis using the RB1 Monoclonal Antibody clone FCD-18 at 1:50 (green), with phalloidin-TRITC labeling of filamentous actin (red) and DAPI nuclear counterstaining (blue). The multipanel image shows RB1-associated green fluorescence within the cellular regions, alongside the actin cytoskeleton and nuclei. The merged panel illustrates the relative distribution of these signals.



Retinoblastoma Antibody FCD-18 IHC in Mouse Spleen. Immunohistochemical staining of FFPE mouse spleen tissue using the RB1 Monoclonal Antibody clone FCD-18 at 1:250. Brown DAB staining is distributed across the splenic tissue, with variable labeling among cells in the lymphoid and surrounding regions. Hematoxylin counterstaining reveals the densely packed cellular architecture.



Retinoblastoma Antibody FCD-18 IHC in Rat Lung. Immunohistochemical staining of FFPE rat lung tissue using the RB1 Monoclonal Antibody clone FCD-18 at 1:250. Brown DAB staining is visible along alveolar structures and in scattered cells within the lung parenchyma. Hematoxylin counterstaining highlights the nuclei and surrounding tissue architecture.



Western blot testing of human 1) Jurkat and 2) MCF7 cell lysate with Rb1 antibody. Predicted molecular weight ~110 kDa.

Description

Retinoblastoma Antibody FCD-18 / RB1 Monoclonal Antibody recognizes the retinoblastoma-associated protein, a central regulator of cell cycle progression encoded by the RB1 gene. Commonly known as pRb, this tumor suppressor controls the transition from the G1 phase to the S phase of the cell cycle by regulating transcription factors responsible for DNA replication and cellular proliferation. RB1 belongs to the pocket protein family, which also includes RBL1 (p107) and RBL2 (p130). These proteins share conserved structural regions that support interactions with transcriptional regulators and proteins involved in cell cycle control.

One of the principal functions of RB1 is the inhibition of E2F transcription factors. In its growth-suppressive state, RB1 associates with E2F proteins and restricts the expression of genes required for DNA synthesis and S-phase progression. Mitogenic signaling activates cyclin-dependent kinases, including CDK4/6 and CDK2, which phosphorylate RB1 and progressively alter its interactions with E2F. This regulation allows cells to coordinate cell cycle entry with extracellular growth signals and intracellular conditions.

Beyond its role in cell cycle regulation, RB1 contributes to cellular differentiation, senescence, chromatin organization, and genome stability. Interactions with chromatin-associated proteins help establish transcriptional programs that maintain cell identity and restrict inappropriate proliferation. RB1 also participates in mechanisms that influence

chromosome segregation and the cellular response to DNA damage. These functions demonstrate that retinoblastoma protein activity extends beyond the direct control of E2F-dependent transcription.

Inherited mutations in RB1 are responsible for hereditary retinoblastoma, while somatic alterations occur in numerous malignancies, including osteosarcoma and small cell lung cancer. Functional disruption of the RB pathway can also result from increased cyclin-dependent kinase activity or altered expression of upstream cell cycle regulators. Because RB1 activity is strongly influenced by phosphorylation, total protein abundance does not necessarily reflect its growth-suppressive function. Understanding RB1 regulation is therefore important for interpreting tumor biology and responses to therapies targeting cell cycle progression. NSJ Bioreagents offers this Retinoblastoma Antibody FCD-18 for investigating RB1 expression, cell cycle control, and tumor suppressor signaling.

Explore additional antibodies targeting cell cycle regulators, tumor suppressors, and proteins involved in DNA replication and cellular proliferation in our Cell Biology Antibodies collection.

Application Notes

Optimal dilution of the Rb1 antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Retinoblastoma / Rb was used as the immunogen for the Retinoblastoma Antibody FCD-18.

Storage

Store the Retinoblastoma Antibody FCD-18 at -20oC.

Alternate Names

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

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