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Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody

Retinoblastoma K860 Me1 Antibody
Catalog # ASR5600

Specification

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-Retinoblastoma K860 Me1 Antibody was tested for use in ELISA, Dot Blot, and Western Blot. Expect a band at approximately 106.1kDa in MOLT-4 and other appropriate cell lysates or tissues. Although not tested, expect reactivity in immunoprecipitation and immunohistochemistry.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-Retinoblastoma [Monomethyl Lys860] Antibody was prepared from whole rabbit serum produced by repeated immunizations with a methylated and acetylated synthetic peptide surrounding lysine 860 of human RB1 conjugated to Keyhole Limpet Hemocyanin (KLH).**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Additional Information

Gene ID 5925

Other Names
5925

Purity
This affinity purified antibody is directed against human Retinoblastoma. This product was affinity purified from monospecific antiserum by immunoaffinity purification. This antibody reacts with human RB1 surrounding aa860 and is specific for K860 Me1. Blast analysis of the sequence of the immunogen shows 100% identity with human and 92% identity to rat and mouse.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Protein Information

Name RB1

Function
Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed:10499802). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed:10499802). Both physically blocks E2Fs transactivating domain and recruits chromatin- modifying enzymes that actively repress transcription (PubMed:10499802). Cyclin and CDK-dependent phosphorylation of RB1 induces its dissociation from E2Fs, thereby activating transcription of E2F responsive genes and triggering entry into S phase (PubMed:10499802). RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C (PubMed:15084261). Directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing histone methylation. Recruits and targets histone methyltransferases SUV39H1, KMT5B and KMT5C, leading to epigenetic transcriptional repression. Controls histone H4 'Lys-20' trimethylation. Inhibits the intrinsic kinase activity of TAF1. Mediates transcriptional repression by SMARCA4/BRG1 by recruiting a histone deacetylase (HDAC) complex to the c-FOS promoter. In resting neurons, transcription of the c-FOS promoter is inhibited by BRG1- dependent recruitment of a phospho-RB1-HDAC1 repressor complex. Upon calcium influx, RB1 is dephosphorylated by calcineurin, which leads to release of the repressor complex (By similarity).

Cellular Location
Nucleus. Cytoplasm {ECO:0000250|UniProtKB:P13405}. Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization (PubMed:20940255). Localizes to the cytoplasm when hyperphosphorylated (By similarity). {ECO:0000250|UniProtKB:P13405, ECO:0000269|PubMed:20940255}

Tissue Location
Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Images

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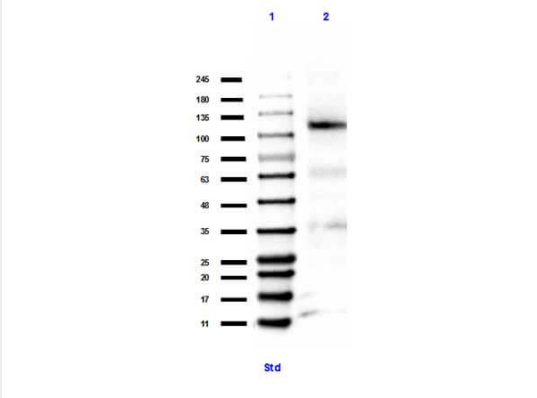

Western Blot of Rabbit anti-Retinoblastoma [Monomethyl Lys860] antibody. Lane 1: MW ladder opal pre-stained (p/n MB-210-0500). Lane 2: MOLT-4 WCL (p/n W09-001-GK2). Load: 35 ug per lane. Primary antibody: Retinoblastoma antibody at 1:1000 for overnight at 4°C. Secondary antibody: rabbit secondary HRP antibody (p/n 611-103-122) at 1:70,000 for 30 min at RT. Block: BlockOut (p/n MB-073) 30 min at RT. Predicted/Observed size: expect 106 kDa for Retinoblastoma protein.

Anti-Retinoblastoma [Monomethyl Lys860] (RABBIT) Antibody - Background

RB1 (RB Transcriptional Corepressor 1) is a protein coding gene. The protein encoded by this gene is a negative regulator of the cell cycle and was the first tumor suppressor gene found. Promotes G0-G1 transition when phosphorylated by CDK3/cyclin-C. Acts as a transcription repressor of E2F1 target genes. The active, hypo-phosphorylated form of RB1 interacts with E2F1 and represses its transcription activity, leading to cell cycle arrest. RB1 is directly involved in heterochromatin formation by maintaining overall chromatin structure and the constitutive heterochromatin, by stabilizing histone methylation. Retinoblastoma recruits and targets histone methyltransferases SUV39H1, KMT5B and KMT5C, leading to epigenetic transcriptional repression. It controls histone H4 Lys-20 trimethylation and inhibits the intrinsic kinase activity of TAF1. It mediates transcriptional repression by SMARCA4/BRG1 by recruiting a histone deacetylase (HDAC) complex to the c-FOS promoter. In resting neurons, transcription of the c-FOS promoter is inhibited by BRG1-dependent recruitment of a phospho-RB1-HDAC1 repressor complex. Upon calcium influx, RB1 is dephosphorylated by calcineurin, which leads to release of the repressor complex (By similarity). In case of viral infections, interactions with SV40 large T antigen, HPV E7 protein, or adenovirus E1A protein induce the disassembly of RB1-E2F1 complex thereby disrupting RB1s activity. RB1 may be associated with diseases such as retinoblastoma, small cell cancer of the lung, bladder cancer, and osteogenic sarcoma. Anti-Retinoblastoma K860 Me1 Antibody is useful for researchers interested in cancer, transcription factor, epigenetics, and enzyme antibody research.