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Anti-Cyclin D1 (RABBIT) Antibody
Cyclin D1 Antibody
Catalog # ASR3663

Specification

Anti-Cyclin D1 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**This antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 34 kDa in size corresponding to Cyclin D1 by western blotting in the appropriate cell lysate or extract. MCF7 may be used as a positive control. Anti-Cyclin D1 is suitable for the detection by immunoblot of human, rat and mouse Cyclin D1.**
Physical State	**Liquid (sterile filtered)**
Immunogen	**Anti-Cyclin D1 was produced by repeated immunizations of full length fusion protein corresponding to the human gene sequence.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Cyclin D1 (RABBIT) Antibody - Additional Information

Gene ID 595

Other Names
595

Purity
This product was prepared from monospecific antiserum by delipidation and defibrination. Antiserum will specifically react with a 40-45 kDa Cyclin D1 protein from human, rat and mouse tissue. No reaction was observed against other related cyclins. Cross reactivity with Cyclin D1 from other species may also occur.

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-Cyclin D1 (RABBIT) Antibody - Protein Information

Name CCND1 {ECO:0000303|PubMed:8204893, ECO:0000312|HGNC:HGNC:1582}

Function
Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:33854235, PubMed:8114739, PubMed:8302605). Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Hypophosphorylates RB1 in early G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8302605). Also a substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:15241418). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:9106657). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:16569215, PubMed:18417529).

Cellular Location
Nucleus. Cytoplasm Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members

Anti-Cyclin D1 (RABBIT) Antibody - Protocols

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

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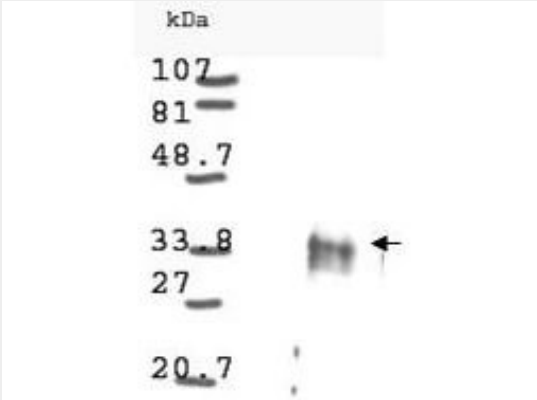
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cyclin D1 (RABBIT) Antibody - Images



Western blot analysis is shown using Rockland's Anti-Cyclin D1 antibody to detect Human Cyclin D1 present in asynchronous HN30 cell lysates. HN30 cells, are from head and neck cancer cells that over express cyclin B1 and D1. Comparison to a molecular weight marker indicates a band of ~34 kDa corresponding to the expected molecular weight for the protein (arrowhead). The blot was incubated with a 1:500 dilution of the antibody at room temperature. Detection occurred using a 1:10,000 of HRP conjugated Goat-a-Rabbit IgG (p/n 611-103-122) and chemiluminescence reagent with a 1-min exposure time. Other detection systems will yield similar results. Personal communication Luca Cote.

Anti-Cyclin D1 (RABBIT) Antibody - Background

Cyclin D1 (also known as G1/S-specific cyclin D1, PRAD1 oncogene, BCL-1 oncogene, and PRAD1: parathyroid adenomatosis 1) is encoded by a gene that belongs to the highly conserved cyclin family. Cyclins are characterized by a dramatic periodicity in protein abundance throughout the cell cycle and function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns, which contribute to the temporal coordination of each mitotic event. Cyclin D1 forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis.