

CCND1-Y226 Antibody Blocking peptide
Synthetic peptide
Catalog # BP5314d**Specification****CCND1-Y226 Antibody Blocking peptide - Product Information**Primary Accession
Other Accession[P24385](#)
[NP_444284](#)**CCND1-Y226 Antibody Blocking peptide - Additional Information****Gene ID** 595**Other Names**

G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, BCL-1 oncogene, PRAD1 oncogene, CCND1, BCL1, PRAD1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CCND1-Y226 Antibody Blocking peptide - 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: 1833066, PubMed: 1827756, PubMed: 8114739, PubMed: 8302605, PubMed: 19412162, PubMed: 33854235). 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: 1833066, PubMed: 1827756, PubMed: 8114739, PubMed: 8302605, PubMed: 19412162).

Hypophosphorylates RB1 in early G(1) phase (PubMed:1833066, PubMed:1827756, PubMed:8114739, PubMed:8302605, PubMed:19412162). Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals (PubMed:1833066, PubMed:1827756, PubMed:8302605, PubMed:19412162). 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

CCND1-Y226 Antibody Blocking peptide - Protocols

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

- [Blocking Peptides](#)

CCND1-Y226 Antibody Blocking peptide - Images

CCND1-Y226 Antibody Blocking peptide - Background

CCND1 belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin 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.

CCND1-Y226 Antibody Blocking peptide - References

Edel, M.J., et al. Genes Dev. 24(6):561-573(2010)Zhong, Z., et al. Cancer Res. 70(5):2105-2114(2010)Kanaan, Z., et al. Int. J. Biol. Markers 25(1):27-31(2010)