

CCND1 Blocking Peptide (Center S90)

Synthetic peptide

Catalog # BP20415c

Specification**CCND1 Blocking Peptide (Center S90) - Product Information**

Primary Accession

[P24385](#)

Other Accession

[Q2KI22](#), [Q6FI00](#)**CCND1 Blocking Peptide (Center S90) - 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 Blocking Peptide (Center S90) - 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](http://www.uniprot.org/citations/1833066), PubMed: [1827756](http://www.uniprot.org/citations/1827756), PubMed: [8114739](http://www.uniprot.org/citations/8114739), PubMed: [8302605](http://www.uniprot.org/citations/8302605), PubMed: [19412162](http://www.uniprot.org/citations/19412162), PubMed: [33854235](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/1833066), PubMed: [1827756](http://www.uniprot.org/citations/1827756), PubMed: [8114739](http://www.uniprot.org/citations/8114739), PubMed: [8302605](http://www.uniprot.org/citations/8302605), PubMed: [19412162](http://www.uniprot.org/citations/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 Blocking Peptide (Center S90) - Protocols

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

- [Blocking Peptides](#)

CCND1 Blocking Peptide (Center S90) - Images

CCND1 Blocking Peptide (Center S90) - Background

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. 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. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.