

## Phospho-CCND1(T288) Blocking Peptide

Synthetic peptide Catalog # BP3884a

## **Specification**

Phospho-CCND1(T288) Blocking Peptide - Product Information

Primary Accession P24385
Other Accession NP 444284.1

Phospho-CCND1(T288) 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

### Target/Specificity

The synthetic peptide sequence is selected from aa 282-294 of HUMAN CCND1

#### **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.

Phospho-CCND1(T288) Blocking Peptide - Protein Information

Name CCND1

Synonyms BCL1, PRAD1

# **Function**

Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates

# Phospho-CCND1(T288) Blocking Peptide - Background

The protein encoded by this gene 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

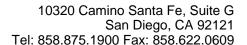
positively by Rb. Mutations, amplification and overexpression of

this gene, which alters cell cycle progression, are observed

frequently in a variety of tumors and may contribute to tumorigenesis.

# Phospho-CCND1(T288) Blocking Peptide - References

Aggarwal, P., et al. Cancer Cell 18(4):329-340(2010) lwatani, K., et al. Biochem. Biophys. Res. Commun. 400(3):426-431(2010) Halilovic, E., et al. Cancer Res. 70(17):6804-6814(2010) Zheng, W., et al. Anal. Quant. Cytol. Histol. 32(3):155-160(2010) Satiroglu-Tufan, N.L., et al. Genet. Mol. Res. 9(3):1557-1567(2010)





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 mitogenenic 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. Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner.

#### **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

# Phospho-CCND1(T288) Blocking Peptide - Protocols

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

• Blocking Peptides