10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

CDK4 Antibody (Center C215) Blocking Peptide

Synthetic peptide
Catalog # BP7520d

Specification

CDK4 Antibody (Center C215) Blocking Peptide - Product Information

Primary Accession P11802

CDK4 Antibody (Center C215) Blocking Peptide - Additional Information

Gene ID 1019

Other Names
Cyclin-dependent kinase 4, Cell division protein kinase 4, PSK-J3, CDK4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7520d was selected from the Center region of human CDK4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

CDK4 Antibody (Center C215) Blocking Peptide - Protein Information

Name CDK4

Function

CDK4 Antibody (Center C215) Blocking Peptide - Background

CDK4 is a member of the Ser/Thr protein kinase family. This protein is highly similar to the gene products of S. cerevisiae cdc28 and S. pombe cdc2. It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosphorylation of retinoblastoma gene product (Rb). Mutations in this gene as well as in its related proteins including D-type cyclins, p16(INK4a) and Rb were all found to be associated with tumorigenesis of a variety of cancers. Multiple polyadenylation sites of the gene have been reported.

CDK4 Antibody (Center C215) Blocking Peptide - References

Mori, N., et al., Int. J. Hematol. 77(3):259-262 (2003).Masaki, T., et al., Hepatology 37(3):534-543 (2003).Gump, J., et al., J. Biol. Chem. 278(9):6619-6622 (2003).Ramirez, R.D., et al., Oncogene 22(3):433-444 (2003).Detjen, K.M., et al., Exp. Cell Res. 282(2):78-89 (2003).

Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes 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 phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.

Cellular Location
Cytoplasm. Nucleus. Nucleus membrane. Note=Cytoplasmic when non-complexed Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps. Colocalizes with RB1 after release into the nucleus.

CDK4 Antibody (Center C215) Blocking Peptide - Protocols

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

- Blocking Peptides