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CDKN1A Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP13650b

Specification

CDKN1A Antibody (C-term) Blocking peptide - Product Information

Primary Accession P38936

CDKN1A Antibody (C-term) Blocking peptide - Additional Information

Gene ID 1026

Other Names
Cyclin-dependent kinase inhibitor 1, CDK-interacting protein 1, Melanoma differentiation-associated protein 6, MDA-6, p21, CDKN1A, CAP20, CDKN1, CIP1, MDA6, PIC1, SDI1, WAF1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13650b was selected from the C-term region of CDKN1A. 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.

CDKN1A Antibody (C-term) Blocking peptide - Protein Information

Name CDKN1A

CDKN1A Antibody (C-term) Blocking peptide - Background

This gene encodes a potent cyclin-dependent kinaseinhibitor. The encoded protein binds to and inhibits the activityof cyclin-CDK2 or -CDK4 complexes, and thus functions as aregulator of cell cycle progression at G1. The expression of thisgene is tightly controlled by the tumor suppressor protein p53,through which this protein mediates the p53-dependent cell cycle G1phase arrest in response to a variety of stress stimuli. Thisprotein can interact with proliferating cell nuclear antigen(PCNA), a DNA polymerase accessory factor, and plays a regulatoryrole in S phase DNA replication and DNA damage repair. This proteinwas reported to be specifically cleaved by CASP3-like caspases,which thus leads to a dramatic activation of CDK2, and may beinstrumental in the execution of apoptosis following caspaseactivation. Multiple alternatively spliced variants have been foundfor this gene.

CDKN1A Antibody (C-term) Blocking peptide - References

Hu, F., et al. Oncogene 29(40):5464-5474(2010)Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Jiang, P., et al. Acta Biochim. Biophys. Sin. (Shanghai) 42(9):671-676(2010)Ho-Pun-Cheung, A., et al. Pharmacogenomics J. (2010) In press :Do Nascimento Borges, B., et al. In Vivo 24(4):579-582(2010)

Synonyms CAP20, CDKN1, CIP1, MDA6, PIC1, SDI1, WA

Function
May be involved in p53/TP53 mediated inhibition of cellular proliferation in response to DNA damage. Binds to and inhibits cyclin- dependent kinase activity, preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle progression. Functions in the nuclear localization and assembly of cyclin D-CDK4 complex and promotes its kinase activity towards RB1. At higher stoichiometric ratios, inhibits the kinase activity of the cyclin D- CDK4 complex. Inhibits DNA synthesis by DNA polymerase delta by competing with POLD3 for PCNA binding (PubMed:11595739). Plays an important role in controlling cell cycle progression and DNA damage- induced G2 arrest (PubMed:9106657).

Cellular Location
Cytoplasm. Nucleus

Tissue Location
Expressed in all adult tissues, with 5-fold lower levels observed in the brain

CDKN1A Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides