

p21 (CDKN1A) Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP7527b

Specification

p21 (CDKN1A) Antibody (C-term) Blocking peptide - Product Information

Primary Accession [P38936](#)

p21 (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 [AP7527b](#) was selected from the C-term region of human 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.

p21 (CDKN1A) Antibody (C-term) Blocking peptide - Protein Information

p21 (CDKN1A) Antibody (C-term) Blocking peptide - Background

CDKN1A is a potent cyclin-dependent kinase inhibitor. It binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. Expression is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation.

p21 (CDKN1A) Antibody (C-term) Blocking peptide - References

Fukuchi, K., et al., *Biochim. Biophys. Acta* 1642(3):163-171 (2003). Frouin, I., et al., *J. Biol. Chem.* 278(41):39265-39268 (2003). Dupont, J., et al., *J. Biol. Chem.* 278(39):37256-37264 (2003). Di Padova, M., et al., *J. Biol. Chem.* 278(38):36496-36504 (2003). Bai, Y.Q., et al., *Oncogene* 22(39):7942-7949 (2003).

Name CDKN1A

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

p21 (CDKN1A) Antibody (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)