

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

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**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](/product/products/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****Name** CDKN1A ([HGNC:1784](#))**Function**

Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (PubMed: [9106657](http://www.uniprot.org/citations/9106657)). Involved in p53/TP53 mediated inhibition of cellular proliferation in response to DNA damage. Also involved in p53-independent DNA damage-induced G2 arrest mediated by CREB3L1 in astrocytes and osteoblasts (By similarity). 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](http://www.uniprot.org/citations/11595739))

target="\_blank">11595739</a>).

**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](#)

**p21 (CDKN1A) Antibody (C-term) Blocking peptide - Images****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).