

**P21Cip1 Antibody Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP9311a****Specification**

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**P21Cip1 Antibody Blocking peptide - Product Information**Primary Accession [P38936](#)**P21Cip1 Antibody 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

**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.

**P21Cip1 Antibody 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)).

**Cellular Location**

Cytoplasm. Nucleus

**Tissue Location**

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

### **P21Cip1 Antibody Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

### **P21Cip1 Antibody Blocking peptide - Images**

### **P21Cip1 Antibody Blocking peptide - Background**

This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene 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. Two alternatively spliced variants, which encode an identical protein, have been reported.

### **P21Cip1 Antibody Blocking peptide - References**

Scott, S.A., et al., Leuk. Res. 28(12):1293-1301 (2004).Amini, S., et al., J. Biol. Chem. 279(44):46046-46056 (2004).Chen, T., et al., Cancer Res. 64(20):7412-7419 (2004).Sieburg, M., et al., J. Virol. 78(19):10399-10409 (2004).Giraud, S., et al., Oncogene 23(44):7391-7398 (2004).