

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

P21Cip1 Antibody Blocking peptide - Product InformationPrimary 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). 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). Negatively regulates the CDK4- and CDK6-driven phosphorylation of RB1 in keratinocytes, thereby resulting in the release of E2F1 and subsequent transcription of E2F1-driven G1/S phase promoting genes (By similarity).

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).