

CDKN1A Blocking Peptide (C-term)

Synthetic peptide

Catalog # BP20643c

Specification

CDKN1A Blocking Peptide (C-term) - Product Information

Primary Accession

[P38936](#)**CDKN1A Blocking Peptide (C-term) - 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 is selected from aa 133-144 of HUMAN CDKN1A

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 Blocking Peptide (C-term) - Protein InformationName CDKN1A ([HGNC:1784](#))**Function**

Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (PubMed:<<http://www.uniprot.org/citations/9106657>>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:<<http://www.uniprot.org/citations/11595739>>11595739).

Cellular Location

Cytoplasm. Nucleus

Tissue Location

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

CDKN1A Blocking Peptide (C-term) - Protocols

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

- [Blocking Peptides](#)

CDKN1A Blocking Peptide (C-term) - Images**CDKN1A Blocking Peptide (C-term) - Background**

May be the important intermediate by which p53/TP53 mediates its role as an inhibitor 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.

CDKN1A Blocking Peptide (C-term) - References

Harper J.W., et al. Cell 75:805-816(1993).
El-Deiry W.S., et al. Cell 75:817-825(1993).
Xiong Y., et al. Nature 366:701-704(1993).
Jiang H., et al. Mol. Cell. Differ. 1:285-299(1993).
Jiang H., et al. Oncogene 10:1855-1864(1995).