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Phospho-mouse p21Cip1(S78) Blocking Peptide

Synthetic peptide
Catalog # BP3877a

Specification

Phospho-mouse p21Cip1(S78) Blocking Peptide - Product Information

Primary Accession	P39689
Other Accession	NP_001129489.1

Phospho-mouse p21Cip1(S78) Blocking Peptide - Additional Information

Gene ID 12575

Other Names
Cyclin-dependent kinase inhibitor 1, CDK-interacting protein 1, Melanoma differentiation-associated protein, p21, Cdkn1a, Cip1, Waf1

Target/Specificity
The synthetic peptide sequence is selected from aa 72-85 of MOUSE 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.

Phospho-mouse p21Cip1(S78) Blocking Peptide - Protein Information

Name Cdkn1a

Synonyms Cip1, Waf1

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 (PubMed:25329316). Inhibits DNA synthesis by DNA polymerase delta by competing with POLD3 for PCNA binding (By similarity). Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P38936}. Nucleus

Phospho-mouse p21Cip1(S78) Blocking Peptide - Protocols

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

- Blocking Peptides

Phospho-mouse p21Cip1(S78) Blocking Peptide - Images

Phospho-mouse p21Cip1(S78) Blocking Peptide - Background

The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activtiy is required for cell cycle G1/S transition. This protein has been shown to interact with and be involved in the phosphorylation of tumor suppressor protein Rb. The CDK4 activity associated with this cyclin was reported to be necessary for cell cycle progression through G2 phase into mitosis after UV radiation. Several transcript variants encoding different isoforms have been found for this gene.

Phospho-mouse p21Cip1(S78) Blocking Peptide - References

Liu, C.Y., et al. Carcinogenesis 31(7):1259-1263(2010)
Kim, J., et al. Cytokine 50(1):42-49(2010)
Kamatani, Y., et al. Nat. Genet. 42(3):210-215(2010)
Gumina, M.R., et al. Cell Cycle 9(4):820-828(2010)
Radulovich, N., et al. Mol. Cancer 9, 24 (2010) :