

Phospho-mouse p27Kip1(T197) Blocking Peptide
Synthetic peptide
Catalog # BP3878a**Specification****Phospho-mouse p27Kip1(T197) Blocking Peptide**
- Product Information

Primary Accession [P46414](#)
Other Accession [NP_034005.2](#)

Phospho-mouse p27Kip1(T197) Blocking Peptide
- Additional Information

Gene ID 12576

Other Names

Cyclin-dependent kinase inhibitor 1B,
Cyclin-dependent kinase inhibitor p27,
p27Kip1, Cdkn1b

Target/Specificity

The synthetic peptide sequence is selected from aa 190-197 of MOUSE Cdkn1b

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.

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- Protein Information

Name Cdkn1b

Function

Important regulator of cell cycle progression (PubMed:8033213),

Phospho-mouse p27Kip1(T197) Blocking Peptide - Background

This gene encodes a cyclin-dependent kinase inhibitor, which shares a limited similarity with CDK inhibitor CDKN1A/p21. The encoded protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1. The degradation of this protein, which is triggered by its CDK dependent phosphorylation and subsequent ubiquitination by SCF complexes, is required for the cellular transition from quiescence to the proliferative state. [provided by RefSeq].

Phospho-mouse p27Kip1(T197) Blocking Peptide - References

Singh, A., et al. Mol. Cell. Biol. 30(21):5145-5159(2010)
Antico-Arciuch, V.G., et al. Oncogene 29(42):5678-5686(2010)
Mitsuhashi, T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(37):16331-16335(2010)
Zhang, Y., et al. Genes Dev. 24(16):1746-1757(2010)
Wang, Y.Y., et al. J Mol Cell Biol 2(4):209-216(2010)

PubMed:12972555). Inhibits the kinase activity of CDK2 bound to cyclin A, but has little inhibitory activity on CDK2 bound to SPDYA (By similarity). Involved in G1 arrest. Potent inhibitor of cyclin E- and cyclin A-CDK2 complexes (PubMed:8033213). Forms a complex with cyclin type D-CDK4 complexes and is involved in the assembly, stability, and modulation of CCND1-CDK4 complex activation. Acts either as an inhibitor or an activator of cyclin type D-CDK4 complexes depending on its phosphorylation state and/or stoichiometry.

Cellular Location

Nucleus. Cytoplasm. Endosome.
Note=Nuclear and cytoplasmic in quiescent cells. AKT- or RSK-mediated phosphorylation on Thr-197, binds 14-3-3, translocates to the cytoplasm and promotes cell cycle progression. Mitogen-activated UHMK1 phosphorylation on Ser-10 also results in translocation to the cytoplasm and cell cycle progression Phosphorylation on Ser-10 facilitates nuclear export. Translocates to the nucleus on phosphorylation of Tyr-88 and Tyr-89 (By similarity) Colocalizes at the endosome with SNX6; this leads to lysosomal degradation (PubMed:20228253). {ECO:0000250, ECO:0000269|PubMed:20228253}

Phospho-mouse p27Kip1(T197) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)