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# p27Kip1 Blocking Peptide (N-term S12)

**Synthetic peptide**
**Catalog # BP20014a**

## Specification

### p27Kip1 Blocking Peptide (N-term S12) - Product Information

| | |
|---|---|
| Primary Accession | P46527 |
| Other Accession | P46414, Q60439, NP_004055.1 |

### p27Kip1 Blocking Peptide (N-term S12) - Additional Information

**Gene ID** 1027

**Other Names**
Cyclin-dependent kinase inhibitor 1B, Cyclin-dependent kinase inhibitor p27, p27Kip1, CDKN1B, KIP1

**Target/Specificity**
The synthetic peptide sequence is selected from aa 5-19 of HUMAN 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.

### p27Kip1 Blocking Peptide (N-term S12) - Protein Information

**Name** CDKN1B {ECO:0000303|PubMed:20824794}

**Function**
Important regulator of cell cycle progression. Inhibits the kinase activity of CDK2 bound to cyclin A, but has little inhibitory activity on CDK2 bound to SPDYA (PubMed:<a href="http://www.uniprot.org/citations/28666995" target="_blank">28666995</a>). Involved in G1 arrest. Potent inhibitor of cyclin E- and cyclin A-CDK2 complexes. 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 stoichometry.

**Cellular Location**
Nucleus. Cytoplasm. Endosome. Note=Nuclear and cytoplasmic in quiescent cells. AKT- or RSK-mediated phosphorylation on Thr-198, 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. Colocalizes at the endosome with SNX6; this leads to lysosomal degradation (By similarity)

**Tissue Location**
Expressed in kidney (at protein level) (PubMed:15509543). Expressed in all tissues tested (PubMed:8033212) Highest levels in skeletal muscle, lowest in liver and kidney (PubMed:8033212).

## p27Kip1 Blocking Peptide (N-term S12) - Protocols

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

- Blocking Peptides

## p27Kip1 Blocking Peptide (N-term S12) - Images

## p27Kip1 Blocking Peptide (N-term S12) - 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].

## p27Kip1 Blocking Peptide (N-term S12) - References

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Kedde, M., et al. Nat. Cell Biol. 12(10):1014-1020(2010)
Canbay, E., et al. Anticancer Res. 30(7):3093-3098(2010)
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