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p27Kip1 Blocking Peptide (Center S83)

Synthetic peptide
Catalog # BP20016c

Specification

p27Kip1 Blocking Peptide (Center S83) - Product Information

Primary Accession	P46527
Other Accession	NP_004055.1

p27Kip1 Blocking Peptide (Center S83) - 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 78-90 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 (Center S83) - Protein Information

Name CDKN1B

Synonyms KIP1

Function
Important regulator of cell cycle progression. Inhibits the kinase activity of

p27Kip1 Blocking Peptide (Center S83) - 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 (Center S83) - References

Kajihara, R., et al. Biochem. Biophys. Res. Commun. 401(3):350-355(2010)
Kedde, M., et al. Nat. Cell Biol. 12(10):1014-1020(2010)
Canbay, E., et al. Anticancer Res. 30(7):3093-3098(2010)
Do Nascimento Borges, B., et al. In Vivo 24(4):579-582(2010)
Qin, J., et al. Hepatogastroenterology 57 (99-100), 547-553 (2010) :

CDK2 bound to cyclin A, but has little inhibitory activity on CDK2 bound to SPDYA (PubMed:28666995). 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 all tissues tested. Highest levels in skeletal muscle, lowest in liver and kidney

p27Kip1 Blocking Peptide (Center S83) - Protocols

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

- Blocking Peptides