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Phospho-p27Kip1(S10) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3191a

Product Information

Application	WB, IHC-P, E
Primary Accession	P46527
Other Accession	P46414, Q60439
Reactivity	Human
Predicted	Mouse, Hamster, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22073

Additional Information

Gene ID	1027
Other Names	Cyclin-dependent kinase inhibitor 1B, Cyclin-dependent kinase inhibitor p27, p27Kip1, CDKN1B, KIP1
Target/Specificity	This p27Kip1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S10 of human p27Kip1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-p27Kip1(S10) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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: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 stoichiometry.
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).

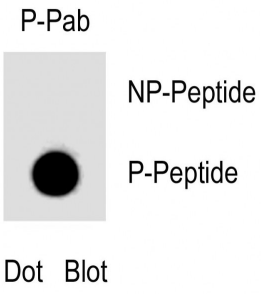
Background

p27Kip1 is 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.

References

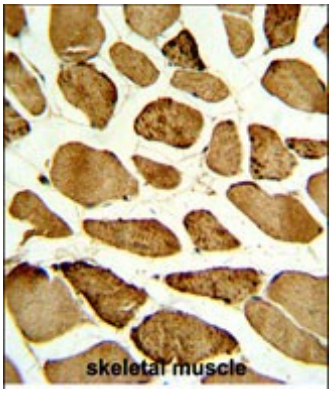
Kawamata, N., et al., Eur. J. Haematol. 74(5):424-429 (2005). Andreu, E.J., et al., Cancer Res. 65(8):3264-3272 (2005). Wingate, H., et al., J. Biol. Chem. 280(15):15148-15157 (2005). Wang, C., et al., J. Biol. Chem. 280(13):12339-12343 (2005). Rassidakis, G.Z., et al., Blood 105(2):827-829 (2005).

Images



Dot blot analysis of Phospho-p27Kip1(S10) Phospho-specific Pab on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antobodies working concentration was 0. 5ug per ml.

Formalin-fixed and paraffin-embedded human skeletal muscle with Phospho-p27Kip1-S10 Antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Citations

- Androgen Receptor Enhances p27 Degradation in Prostate Cancer Cells through Rapid and Selective TORC2 Activation.
- The role of p27(Kip1) in dasatinib-enhanced paclitaxel cytotoxicity in human ovarian cancer cells.
- Gefitinib resistance of cancer cells correlated with TM4SF5-mediated epithelial-mesenchymal transition.

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