

Phospho-p27Kip1(S178) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3192a**Specification**

Phospho-p27Kip1(S178) Antibody - Product Information

Application	IHC-P, WB,E
Primary Accession	P46527
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22073

Phospho-p27Kip1(S178) Antibody - 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 S178 of human p27Kip1.

Dilution

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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(S178) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-p27Kip1(S178) Antibody - 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

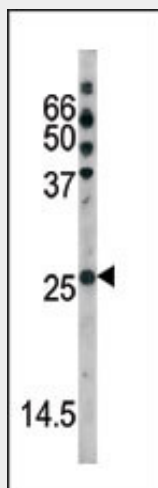
Expressed in kidney (at protein level) (PubMed:15509543). Expressed in all tissues tested (PubMed:8033212) Highest levels in skeletal muscle, lowest in liver and kidney (PubMed:8033212).

Phospho-p27Kip1(S178) Antibody - Protocols

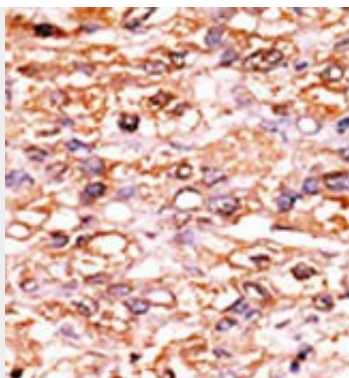
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-p27Kip1(S178) Antibody - Images



The anti-Phospho-p27Kip1-S178 Pab (Cat. #AP3192a) is used in Western blot to detect Phospho-p27Kip1-S178 in HL60 tissue lysate



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Phospho-p27Kip1(S178) Antibody - 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.

Phospho-p27Kip1(S178) Antibody - 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).