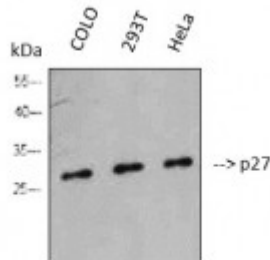


Anti-p27 antibody



Western Blot (WB) analysis of 1)COLO, 2)293T, 3)HeLa cell lysates using p27 Antibody (STJ94866).



Description

p27 is a protein encoded by the CDKN1B gene which is approximately 22 kDa. p27 is localised to the nucleus and cytoplasm. It is involved in CDK-mediated phosphorylation and removal of Cdc6, RET signalling, GAB1 signalosome and cell cycle role of SCF complex in cell cycle regulation. It is a cyclin-dependent kinase inhibitor that binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, which are important in controlling the cell cycle progression at G1. p27 is expressed in all tissues with the highest levels in skeletal muscles. Mutations in the CDKN1B gene may result in multiple endocrine neoplasia. STJ94866 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of p27 protein.

Model	STJ94866
Host	Rabbit
Reactivity	Human
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human p27 around the non-phosphorylation site of T198.
Immunogen Region	140-220 aa
Gene ID	1027
Gene Symbol	CDKN1B
Dilution range	WB 1:500-1:2000ELISA 1:5000
Specificity	p27 Polyclonal Antibody detects endogenous levels of p27 protein.

Tissue Specificity	Expressed in all tissues tested. Highest levels in skeletal muscle, lowest in liver and kidney.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Cyclin-dependent kinase inhibitor 1B Cyclin-dependent kinase inhibitor p27 p27Kip1
Molecular Weight	27 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1785OMIM:600778
Alternative Names	Cyclin-dependent kinase inhibitor 1B Cyclin-dependent kinase inhibitor p27 p27Kip1
Function	Important regulator of cell cycle progression. 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.
Sequence and Domain Family	A peptide sequence containing only AA 28-79 retains substantial Kip1 cyclin A/CDK2 inhibitory activity.
Cellular Localization	Nucleus. Cytoplasm. Endosome. 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 .
Post-translational Modifications	Phosphorylated; phosphorylation occurs on serine, threonine and tyrosine residues. Phosphorylation on Ser-10 is the major site of phosphorylation in resting cells, takes place at the G(0)-G(1) phase and leads to protein stability. Phosphorylation on other sites is greatly enhanced by mitogens, growth factors, cMYC and in certain cancer cell lines. The phosphorylated form found in the cytoplasm is inactivate. Phosphorylation on Thr-198 is required for interaction with 14-3-3 proteins. Phosphorylation on Thr-187, by CDK1 and CDK2 leads to protein ubiquitination and proteasomal degradation. Tyrosine phosphorylation promotes this process. Phosphorylation by PKB/AKT1 can be suppressed by LY294002, an inhibitor of the catalytic subunit of PI3K. Phosphorylation on Tyr-88 and Tyr-89 has no effect on

binding CDK2, but is required for binding CDK4. Dephosphorylated on tyrosine residues by G-CSF. Ubiquitinated; in the cytoplasm by the KPC complex (composed of RNF123/KPC1 and UBAC1/KPC2) and, in the nucleus, by SCF(SKP2). The latter requires prior phosphorylation on Thr-187. Ubiquitinated; by a TRIM21-containing SCF(SKP2)-like complex; leads to its degradation. Subject to degradation in the lysosome. Interaction with SNX6 promotes lysosomal degradation .

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