abcam

Product datasheet

Recombinant Human p27 KIP 1 protein (Tagged) ab56279

3 Images

Description

Product name	Recombinant Human p27 KIP 1 protein (Tagged)
Purity	> 70 % Affinity purified. Purified by affinity chromatography
Expression system	Escherichia coli
Accession	P46527
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MSNVRVSNGS PSLERMDARQ AEHPKPSACR NLFGPVDHEE LTRDLEKHCR DMEEASQRKW NFDFQNHKPL EGKYEWQEVE KGSLPEFYYR PPRPPKGACK VPAQESQDVS GSRPAAPLIG APANSEDTHL VDPKTDPSDS QTGLAEQCAG IRKRPATDDS STQNKRANRT EENVSDGSPN AGSVEQTPKK PGLRRRQT
Predicted molecular weight	52 kDa
Amino acids	1 to 198
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab56279** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE ELISA Western blot
Form	Liquid

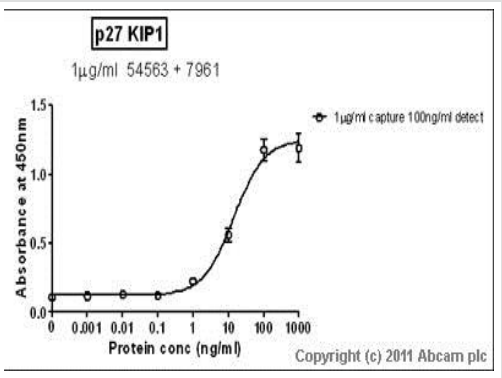
Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

General Info

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 stoichometry.
Tissue specificity	Expressed in all tissues tested. Highest levels in skeletal muscle, lowest in liver and kidney.
Involvement in disease	Defects in CDKN1B are the cause of multiple endocrine neoplasia type 4 (MEN4) [MIM:610755]. Multiple endocrine neoplasia (MEN) syndromes are inherited cancer syndromes of the thyroid. MEN4 is a MEN-like syndrome with a phenotypic overlap of both MEN1 and MEN2.
Sequence similarities	Belongs to the CDI family.
Domain	A peptide sequence containing only AA 28-79 retains substantial Kip1 cyclin A/CDK2 inhibitory activity.
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 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.
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 and this leads to lysosomal degradation.

Images



Sandwich ELISA - Recombinant Human p27 KIP 1 protein (ab56279)

Standard curve for p27 KIP 1 (Analyte: ab56279); dilution range 1pg/ml to 1µg/ml using Capture Antibody Mouse monoclonal to p27 KIP 1 (**ab54563**) at 1µg/ml and Detector Antibody Rabbit polyclonal to p27 KIP 1 (**ab7961**) at 0.1µg/ml.

SDS-PAGE - Recombinant Human p27 KIP 1 protein (ab56279)

SDS-PAGE analysis of ab56279 with molecular weight markers. Approximate molecular weight 52kDa.

Western blot - Recombinant Human p27 KIP 1 protein (ab56279)

Ab7961 recognizes the tagged recombinant p27 KIP 1 protein (ab56279) which has an expected molecular weight of 52 kDa.

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