


Product datasheet

Anti-p27 KIP 1 antibody ab39665

1 Image

Overview

| | |
|----------------------------|--|
| Product name | Anti-p27 KIP 1 antibody |
| Description | Rabbit polyclonal to p27 KIP 1 |
| Host species | Rabbit |
| Specificity | ab39665 detects endogenous levels of total p27 KIP 1. |
| Tested applications | Suitable for: WB, IHC-P, ELISA |
| Species reactivity | Reacts with: Human Predicted to work with: Mouse, Rat  |
| Immunogen | Synthetic peptide corresponding to Human p27 KIP 1. Synthetic non-phosphopeptide derived from human p27 KIP 1 around the phosphorylation site of Serine 10 (around aa 1-50). |
| Positive control | A2780 and COLO cell extracts and lung carcinoma. |

Properties

| | |
|-----------------------------|---|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. |
| Storage buffer | Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS (without Mg ²⁺ and Ca ²⁺), 150mM Sodium chloride, pH 7.4 |
| Purity | Immunogen affinity purified |
| Clonality | Polyclonal |
| Isotype | IgG |

Applications

Our [Abpromise guarantee](#) covers the use of **ab39665** in the following tested applications.

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

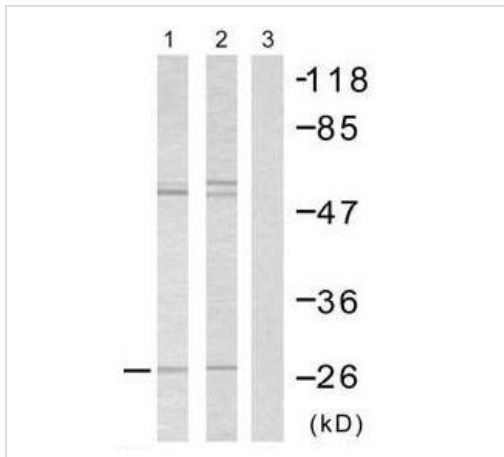
| Application | Abreviews | Notes |
|-------------|-----------|--|
| WB | | 1/500 - 1/1000. Detects a band of approximately 28 kDa (predicted molecular weight: 22 kDa). |

| Application | Abreviews | Notes |
|-------------|-----------|--|
| IHC-P | | Use at an assay dependent concentration. |
| ELISA | | 1/10000. |

Target

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|---|--|
| 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. |
| 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



Western blot - Anti-p27 KIP 1 antibody (ab39665)

All lanes : Anti-p27 KIP 1 antibody (ab39665)
at 1/500 dilution

Lane 1 : A2780 cell extract

Lane 2 : COLO cell extract

Lane 3 : COLO cell extract with synthesized peptide

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : Alkaline Phosphatase AffiniPure
Goat Anti-Rabbit IgG (H+L)

Predicted band size: 22 kDa

Observed band size: 28 kDa

Additional bands at: 60 kDa, 62 kDa. We are unsure as to the identity of these extra bands.

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