

Rabbit Anti-CDKN1B/p27 KIP 1/AF350 Conjugated antibody

SL0742R-AF350

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| Product Name | Anti-CDKN1B/p27 KIP 1/AF350 |
| Chinese Name | AF350 标记的 P27 抗体/周期素依赖激酶抑制剂 |
| Alias | p27 KIP 1; CDKN1B_HUMAN; AA408329; AI843786; Cdk1b; CDKN 1B; CDKN 4; CDKN1B; CDKN1B; CDKN4; CDKN4; Cyclin Dependent Kinase Inhibitor 1B; Cyclin Dependent Kinase Inhibitor 1B; Cyclin dependent kinase inhibitor p27; Cyclin dependent kinase inhibitor p27; Cyclin-dependent kinase inhibitor 1B (p27, Kip1); Cyclin-dependent kinase inhibitor 1B; Cyclin-dependent kinase inhibitor p27; Cyclin-dependent kinase inhibitor p27 Kip1; KIP 1; KIP1; MEN1B; MEN4; OTTHUMP00000195098; OTTHUMP00000195099; p27; p27 Kip1; P27-like cyclin-dependent kinase inhibitor; P27KIP1. |
| Research Area | Tumour immunology Chromatin and nuclear signals Signal transduction Apoptosis |
| Immunogen Species | Rabbit |
| Clonality | Polyclonal |
| React Species | Human,Mouse,Rat(predicted:Chicken,Dog,Pig,Sheep) |
| Applications | Flow-Cyt=1µg/Test ,IF=1:200-800 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user. |
| Molecular weight | 22kDa |
| Form | Lyophilized or Liquid |
| Concentration | 1mg/ml |
| immunogen | KLH conjugated synthetic peptide derived from human P27 kip1 |
| Lsotype | IgG |
| Purification | affinity purified by Protein A |
| Storage Buffer | 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol |
| Storage | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH |

7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

background:

Cell cycle progression is regulated by cyclins and their cognate Cdks. p27 KIP 1 is a cell cycle regulatory mitotic inhibitor of cdk activity. p27 KIP 1 is a candidate tumor suppressor gene, and has been proposed to function as a possible mediator of TGF beta induced G1 arrest. p27 KIP 1 is up regulated in response to antimitogenic stimuli. The increased protein expression of p27 results in cellular arrest by binding to cyclin/Cdk complexes such as cyclin D1/Cdk4. p27 Kip1 is regulated by phosphorylation on serine 10 (S10) and threonine 187 (T187). Phosphorylation by CDK2 on T187 results in ubiquitylation and degradation of p27 Kip 1; while phosphorylation by hKIS on S10 signals the nuclear export to the cytoplasm.

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.

Product Detail

Subunit:

Forms a ternary complex with CCNE1/CDK2/CDKN1B.

Subcellular 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.

Tissue Specificity:

Expressed in all tissues tested. Highest levels in skeletal muscle, lowest in liver and kidney.

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.

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.

Similarity:

Belongs to the CDI family.

Database links:

[Entrez Gene: 1027](#) Human

[Entrez Gene: 12576](#) Mouse

[Entrez Gene: 83571](#) Rat

[Omim: 600778](#) Human

[SwissProt: P46527](#) Human

[SwissProt: P46414](#) Mouse

[Unigene: 238990](#) Human

[Unigene: 2958](#) Mouse

Important Note:

This product as supplied is intended for research use only, not for use in



human, therapeutic or diagnostic applications.

P27 蛋白是一种新发现的周期素依赖激酶抑制剂，属于细胞周期的负性调控因子。P27 基因及其产物的异常表达可能与某些 Tumour 的发生、发展有着密切的关系。P27 蛋白对细胞周期的调控及在 Tumour 中发挥着很重要的作用，The nucleus 表达。