



## Rabbit Anti-phospho-CDKN1A/p21 (Thr57) antibody

SL5238R

<b>Product Name:</b>	phospho-CDKN1A/p21 (Thr57)
<b>Chinese Name:</b>	磷酸化p21蛋白抗体
<b>Alias:</b>	CDKN1A/p21 (phospho Thr57); p21 (phospho T57); p21 (phospho Thr57); Activating Fragment 1; CAP20; Cation chloride cotransporter-interacting protein 1; CDK Interacting Protein 1; CDK-interacting protein 1; CDKI; CDKN 1; CDKN1; CDKN1A; CIP1; Cyclin Dependent Kinase Inhibitor 1A; Cyclin-dependent kinase inhibitor 1; Cyclin-dependent kinase inhibitor 1A (P21); Cyclin-dependent kinase inhibitor 1A (p21, Cip1); DNA Synthesis Inhibitor; MDA 6; MDA-6; MDA6; Melanoma Differentiation Associated Protein 6; Melanoma differentiation-associated protein 6; Melanoma differentiation-associated protein; p21; P21 protein; p21CIP1; p21WAF; PIC1; SDI1; SLC12A9; WAF1; Wildtype p53 Activating Fragment 1; Wildtype p53-activated fragment 1; CDN1A_HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	18kDa
<b>Cellular localization:</b>	The nucleuscytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated Synthesised phosphopeptide derived from human CDKN1A around the phosphorylation site of Thr57:TE(p-T)PL
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A

<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	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 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	<p>This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation. Two alternatively spliced variants, which encode an identical protein, have been reported.</p> <p><b>Function:</b> May be the important intermediate by which p53/TP53 mediates its role as an inhibitor of cellular proliferation in response to DNA damage. Binds to and inhibits cyclin-dependent kinase activity, preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle progression. Functions in the nuclear localization and assembly of cyclin D-CDK4 complex and promotes its kinase activity towards RB1. At higher stoichiometric ratios, inhibits the kinase activity of the cyclin D-CDK4 complex.</p> <p><b>Subunit:</b> Interacts with HDAC1; the interaction is prevented by competitive binding of C10orf90/FATS to HDAC1 facilitating acetylation and protein stabilization of CDKN1A/p21. Interacts with MKRN1. Interacts with PSMA3. Interacts with PCNA. Component of the ternary complex, cyclin D-CDK4-CDKN1A. Interacts (via its N-terminal domain) with CDK4; the interaction promotes the assembly of the cyclin D-CDK4 complex, its nuclear translocation and promotes the cyclin D-dependent enzyme activity of CDK4. Binding to CDK2 leads to CDK2/cyclin E inactivation at the G1-S phase DNA damage checkpoint, thereby arresting cells at the G1-S transition during DNA repair. Interacts with PIM1.</p> <p><b>Subcellular Location:</b> Cytoplasmic and Nuclear.</p> <p><b>Tissue Specificity:</b> Expressed in spleen, liver and lung. Not detected in kidney, colon, stomach or brain.</p> <p><b>Post-translational modifications:</b> Phosphorylation of Thr-145 by Akt or of Ser-146 by PKC impairs binding to PCNA.</p>

Phosphorylation at Ser-114 by GSK3-beta enhances ubiquitination by the DCX(DTL) complex. Phosphorylation of Thr-145 by PIM2 enhances CDKN1A stability and inhibits cell proliferation. Phosphorylation of Thr-145 by PIM1 results in the relocation of CDKN1A to the cytoplasm and enhanced CDKN1A protein stability.

Ubiquitinated by MKRN1; leading to polyubiquitination and 26S proteasome-dependent degradation. Ubiquitinated by the DCX(DTL) complex, also named CRL4(CDT2) complex, leading to its degradation during S phase or following UV irradiation.

Ubiquitination by the DCX(DTL) complex is essential to control replication licensing and is PCNA-dependent: interacts with PCNA via its PIP-box, while the presence of the containing the 'K+4' motif in the PIP box, recruit the DCX(DTL) complex, leading to its degradation.

Acetylation leads to protein stability. Acetylated in vitro on Lys-141, Lys-154, Lys-161 and Lys-163. Deacetylation by HDAC1 is prevented by competitive binding of C10orf90/FATS to HDAC1.

**Similarity:**

Belongs to the CDI family.

**SWISS:**

P38936

**Gene ID:**

1026

**Database links:**

[Entrez Gene: 1026](#)Human

[Entrez Gene: 12575](#)Mouse

[Entrez Gene: 114851](#)Rat

[Omin: 116899](#)Human

[SwissProt: P38936](#)Human

[SwissProt: P39689](#)Mouse

[Unigene: 370771](#)Human

[Unigene: 195663](#)Mouse

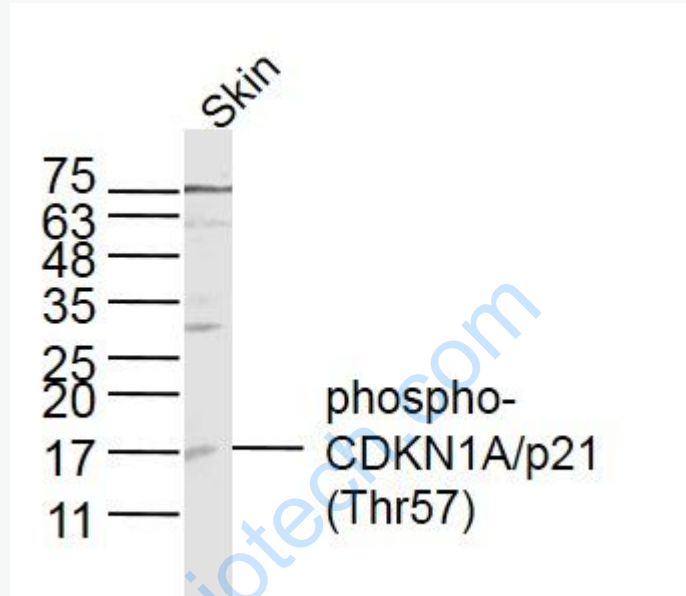
[Unigene: 10089](#)Rat

**Important Note:**

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

therapeutic or diagnostic applications.

p21蛋白的过度表达与Tumour的类型、恶性度、分期以及病人的预后密切相关。主要用于胃肠道癌肿、乳腺癌、肺癌等恶性Tumour的研究。



Picture:

Sample:

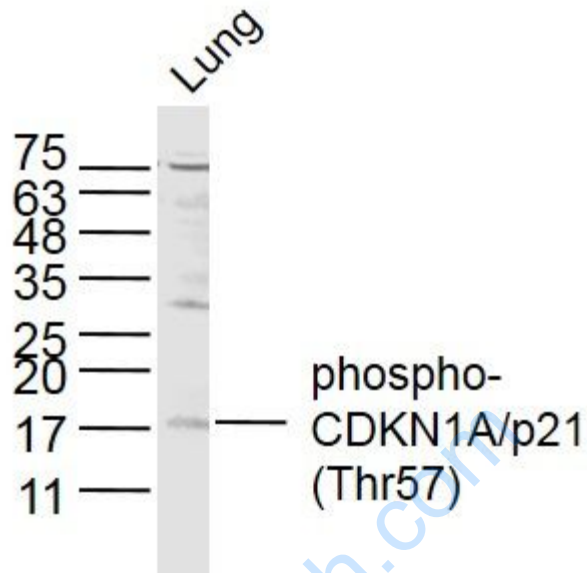
Skin (Mouse) Lysate at 40 ug

Primary: Anti- phospho-CDKN1A/p21 (Thr57) (SL5238R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 18 kD

Observed band size: 18 kD



Sample:

Lung (Mouse) Lysate at 40 ug

Primary: Anti- phospho-CDKN1A/p21 (Thr57) (SL5238R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 18 kD

Observed band size: 18 kD



Tissue/cell: human colon carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-phospho-CDKN1A/P21(Thr57) Polyclonal Antibody,

	Unconjugated(SL5238R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining
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