

## ARG62521 anti-p21 antibody [B459]

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody [B459] recognizes p21
Tested Reactivity	Hu
Tested Application	IHC-Fr, IHC-P
Host	Mouse
Clonality	Monoclonal
Clone	B459
Isotype	IgG1
Target Name	p21
Species	Human
Immunogen	Human p21 protein
Conjugation	Un-conjugated
Alternate Names	Melanoma differentiation-associated protein 6; WAF1; CIP1; CDKN1; CAP20; MDA-6; SDI1; CDK-interacting protein 1; P21; p21CIP1; p21; Cyclin-dependent kinase inhibitor 1

### Application Instructions

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
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### Properties

Form	Liquid
Buffer	PBS and 0.1% Sodium azide
Preservative	0.1% Sodium azide
Concentration	0.2 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Database links	<a href="#">GeneID: 1026 Human</a> <a href="#">Swiss-port # P38936 Human</a>
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<b>Gene Symbol</b>	CDKN1A
<b>Gene Full Name</b>	cyclin-dependent kinase inhibitor 1A (p21, Cip1)
<b>Background</b>	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. Multiple alternatively spliced variants have been found for this gene. [provided by RefSeq, Nov 2010]
<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. [UniProt]
<b>Highlight</b>	Related products: <a href="#">p21 antibodies</a> ; <a href="#">p21 Duos / Panels</a> ; <a href="#">Anti-Mouse IgG secondary antibodies</a> ; Related news: <a href="#">Senescence Marker Antibody Panel is launched</a>
<b>Research Area</b>	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody
<b>Calculated Mw</b>	18 kDa
<b>PTM</b>	Phosphorylation of Thr-145 by Akt or of Ser-146 by PKC impairs binding to PCNA. 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. UV radiation-induced phosphorylation at Thr-80 by LKB1 and at Ser-146 by NUAK1 leads to its degradation. 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. Ubiquitination at Ser-2 leads to degradation by the proteasome pathway. Ubiquitinated by RNF114; leading to proteasomal 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 (By similarity).