

**p21 Antibody**  
**Rabbit mAb**  
**Catalog # AP90546****Specification**

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**p21 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P38936</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
CAP20; CDKN1; CIP1; MDA-6; P21; SDI1; WAF1; p21CIP1	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	18119 Da

**p21 Antibody - Additional Information**

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human p21
Description	The tumor suppressor protein p21 Waf1/Cip1 acts as an inhibitor of cell cycle progression. It functions in stoichiometric relationships forming heterotrimeric complexes with cyclins and cyclin-dependent kinases. In association with CDK2 complexes, it serves to inhibit kinase activity and block progression through G1/S. However, p21 may also enhance assembly and activity in complexes of CDK4 or CDK6 and cyclin D.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**p21 Antibody - Protein Information****Name** CDKN1A ([HGNC:1784](#))**Function**

Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (PubMed:<a href="http://www.uniprot.org/citations/9106657" target="\_blank">9106657</a>). Involved in p53/TP53 mediated inhibition of cellular proliferation in response to DNA damage. Also involved in p53-independent DNA damage-induced G2 arrest mediated by CREB3L1 in astrocytes

and osteoblasts (By similarity). 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. Inhibits DNA synthesis by DNA polymerase delta by competing with POLD3 for PCNA binding (PubMed:<a href="http://www.uniprot.org/citations/11595739" target="\_blank">11595739</a>). Negatively regulates the CDK4- and CDK6-driven phosphorylation of RB1 in keratinocytes, thereby resulting in the release of E2F1 and subsequent transcription of E2F1-driven G1/S phase promoting genes (By similarity).

**Cellular Location**

Cytoplasm. Nucleus

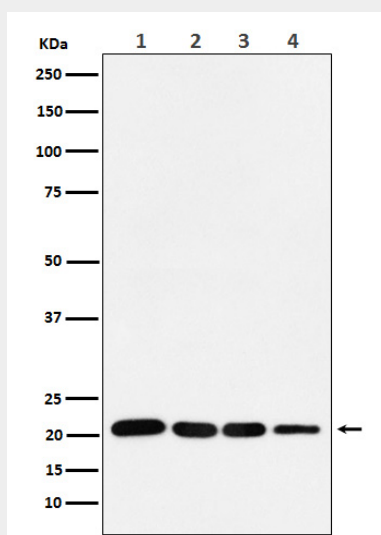
**Tissue Location**

Expressed in all adult tissues, with 5-fold lower levels observed in the brain

**p21 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**p21 Antibody - Images**

Western blot analysis of p21 in (1) MCF-7 cell lysate; (2) HeLa cell lysate. (3) LnCap cell lysate; (4) U87 MG cell lysate.