

## Anti-p21 WAF1 CDKN1A Monoclonal Antibody

Catalog Number: M00145

### About CDKN1A

p21WAF1 is a tumor suppressor gene product critical to maintain proper regulatory control of cell division. p21WAF1 inhibits cyclin/cyclin-dependent kinase (cdk) complexes, causing cell cycle arrest by blocking cell division at the S phase. Various mutations of tumor suppressor genes have been associated with different types of cancers. In these cases, somatic gene therapy with wild-type versions of tumor suppressor genes have been contemplated as anti-cancer therapeutic approaches. p21WAF1 contains p53-binding sites in its promoter and expression of p21WAF1 is induced in WI38 fibroblasts with PMA. Anti-p21WAF1 antibody is useful for researches interested in studying tongue and gastrointestinal cancers, as well as, ubiquitin and cyclin binding proteins.

### Overview

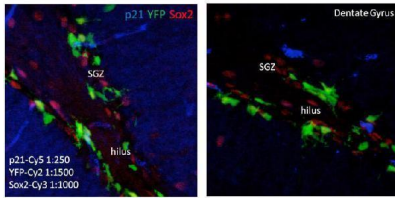
Product Name	Anti-p21 WAF1 CDKN1A Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-p21 WAF1 CDKN1A Monoclonal Antibody (Catalog # M00145). Tested in ELISA, IF, WB applications. This antibody reacts with Human.
Application	ELISA, IP, IF, IHC, WB
Clonality	Monoclonal Clone: WA-1 IgG1 kappa
Formulation	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Mouse
Uniprot ID	P38936

### Technical Details

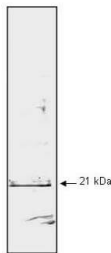
Immunogen	This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p21 fusion protein.
Predicted Reactive Species	Bovine, Mammalian
Isotype	IgG1 kappa
Form	Liquid (sterile filtered)
Concentration	1.0 mg/mL by UV absorbance at 280 nm

Purification	This protein A purified mouse monoclonal antibody reacts with human and mammalian p21. The intracellular protein p21 is a 21 kD protein and also known as wild-type p53-activated fragment 1 (WAF1). It is an inhibitor of cyclin-dependent kinases (Cdks) and proliferating-cell nuclear antigen (PCNA). The antibody is highly specific and shows no cross-reactivity with other closely related mitotic inhibitors.
Suggested Dilutions	ELISA: 1:5,000 - 1:20,000 IHC: User optimized IF Microscopy: 1:250 IP: 1:100 WB: 1:2,000 - 1:10,000 Anti-p21/WAF1 has been tested in ELISA, western blot, and immunofluorescence. This product is also suitable for immunohistochemistry. The antibody detects a 21 kDa band corresponding to the p21 protein. MCF7 cells or UV treated fibroblasts are suggested as a positive control for immunoblotting and immunohistochemistry. Methanol/acetone fixed tissue is reactive for immunohistochemistry. The antibody also reacts with breast carcinoma on frozen sections (methanol/acetone fixation) and on paraffin sections (formalin fixation and microwave treatment prior to staining). In ELISA this monoclonal antibody is useful either as a capture antibody (attached to the solid phase) or for detection of p21 protein. This antibody immunoprecipitates monomeric p21WAF1 and not p21 complexes with other proteins. High level expression of p21WAF1 requires induction of wild-type p53 expression (e.g. via exposure to DNA damaging agents).

## Anti-p21 WAF1 CDKN1A Monoclonal Antibody (M00145) Images



Immunofluorescence of Mouse anti-p21 antibody. Tissue: human brain. Fixation: free-floating. Antigen retrieval: not required. Primary antibody: anti-human-p21 antibody at 1:250 for 1 h at RT. Co-stained with YFP and Sox2 antibodies. Localization: p21 is nuclear and cytoplasmic. Staining: p21 as precipitated blue with Cy5, YFP as precipitated green with Cy2, and Sox2 as precipitated red with Cy3. z-stacks from confocal expressed as one composite focal plain.



Mab anti-Human p21WAF1 antibody (clone WA-1) is shown to detect human p21 by western blot. Detection occurs after 10 µg of a HeLa whole cell lysate is loaded per lane. The blot was incubated with a 1:1,000 dilution of Mab anti-Human p21WAF1 at room temperature for 30 min followed by detection using IRDye™ 800 labeled Goat-a-Mouse IgG [H&L] diluted 1:5,000. A single band corresponding to human p21WAF1 is detected at ~21 kDa when compared with known molecular weight standards (not shown). The antibody may be used to detect endogenous human p21WAF1. IRDye™ 800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

## 4 Publications Citing This Product

1. PubMed ID: 32323839, Wang Q, Han B, Huang W, Qi C, Liu F. Identification of KIF15 as a potential therapeutic target and prognostic factor for glioma. *Oncol Rep.* 2020 Apr;43(4):1035-1044. doi:10.3892/or.2020.7510. Epub 2020 Feb 21. PMID: 32323839; PMCID: PMC7057805.
2. PubMed ID: 21998670, Action Mechanism of Inhibin  $\beta$ -Subunit on the Development of Sertoli Cells and First Wave of Spermatogenesis in Mice
3. PubMed ID: 23563985, Wu K, Liu Y, Lv Y, Cui L, Li W, Chen J, Liang Nc, Li L. *Oncol Rep.* 2013 Jun;29(6):2101-8. Doi: 10.3892/Or.2013.2375. Epub 2013 Apr 3. Ent-11??-Hydroxy-15-Oxo-Kaur-16-En-19-Oic-Acid Induces Apoptosis And Cell Cycle Arrest In Cne-2Z Nasopharyngeal C...

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