



Anti-p21/WAF1 (MOUSE) Monoclonal Antibody - 200-301-171

Code: 200-301-171

Size: 100 µg

Product Description: Anti-p21/WAF1 (MOUSE) Monoclonal Antibody - 200-301-171

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Mouse
Gene Name	WAF1
Species Reactivity	human
Buffer	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	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.
Synonyms	Cyclin-dependent kinase inhibitor 1A (p21, Cip1) antibody, DNA Synthesis Inhibitor antibody, MDA 6 antibody, MDA6 antibody, Melanoma Differentiation Associated Protein 6 antibody
Application Note	This antibody is suitable for immunohistochemistry, ELISA and immunoblotting. 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).
Background	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. The induction of and
Purity And Specificity	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.
Assay Dilutions	User Optimized
ELISA	1:5,000 - 1:20,000
WESTERN BLOT	1:2,000 - 1:10,000
OTHER ASSAYS	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p21 fusion protein.

Related Products

100-401-161	Anti-cdk2 (RABBIT) Antibody - 100-401-161
200-301-174	Anti-p53 (MOUSE) Monoclonal Antibody - 200-301-174
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302

Related Links

NCBI	http://www.ncbi.nlm.nih.gov/protein/NP_510867.1
NCBI - NP_510867.1	http://www.ncbi.nlm.nih.gov/protein/NP_510867.1
UniProt - P38936	http://www.uniprot.org/uniprot/P38936
Gene ID - 1026	http://www.ncbi.nlm.nih.gov/gene/1026

Images

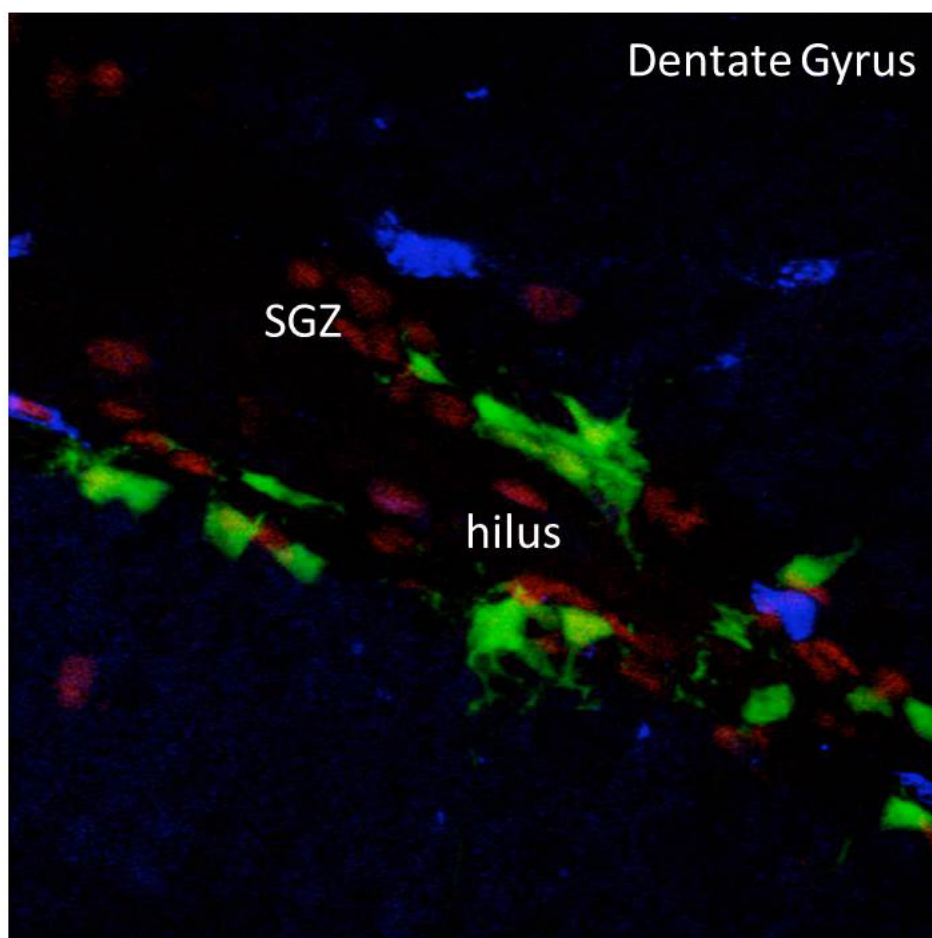
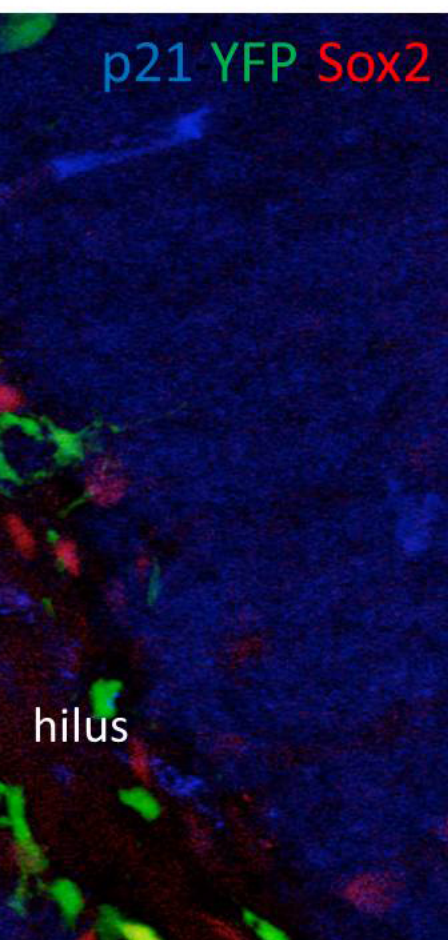
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Mab anti-Human p21WAF1 antibody (clone WA-1) is shown to detect human p21 by western blot. Detection occurs after 10 µg of a HeLa whole cell lysate is loaded per lane. The blot was incubated with a 1:1,000 dilution of Mab anti-Human p21WAF1 at room temperature for 30 min followed by detection using IRDye™800 labeled Goat-a-Mouse IgG [H&L] (610-132-121) 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.



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Immunohistochemistry 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. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT. 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.



Disclaimer

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