

Datasheet for 200-301-171**p21 WAF1 Antibody****Overview**

Description:	Anti-p21/WAF1 (MOUSE) Monoclonal Antibody - 200-301-171
Item No.:	200-301-171
Size:	100 µg
Applications:	ELISA, IF, Multiplex, WB
Reactivity:	Human
Host Species:	Mouse

Product Details

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. Anti-p21WAF1 antibody is useful for researches interested in studying tongue and gastrointestinal cancers, as well as, ubiquitin and cyclin binding proteins.
Synonyms:	mouse anti-p21/WAF1 antibody, Cyclin-dependent kinase inhibitor 1A (p21, CIP1) antibody, DNA Synthesis Inhibitor antibody, MDA 6 antibody, MDA6 antibody, Melanoma Differentiation Associated Protein 6 antibody
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	WA-1
Format:	IgG1

Target Details

Gene Name:	CDKN1A
Reactivity:	Human

Immunogen Type:	Recombinant Protein
Immunogen:	This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p21 fusion protein.
Purity/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.
Relevant Links:	• NCBI - NP_510867.1 • UniProtKB - P38936 • GenelD - 1026

Application Details

Tested Applications:	ELISA, IF, Multiplex, WB
Application Note:	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).
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:20,000
IF:	1:250
IHC:	User Optimized
IP:	1:100
WB:	1:2,000 - 1:10,000

Formulation

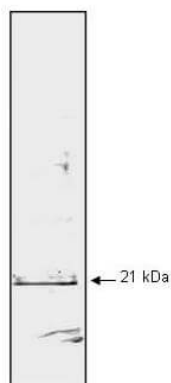
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

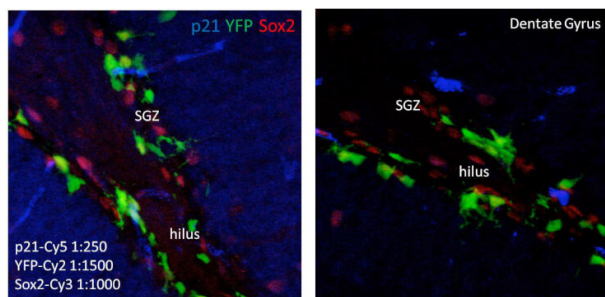
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

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 (p/n W09-000-364) 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] (p/n 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.



Immunofluorescence Microscopy

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.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.