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p21WAF1 (Tumor Suppressor Protein) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM306]
Catalog # AH10993

Product Information

Application	WB, IHC, IF, FC
Primary Accession	P38936
Other Accession	1026, 370771
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Clone Names	SPM306
Calculated MW	18119

Additional Information

Gene ID	1026
Other Names	Cyclin-dependent kinase inhibitor 1, CDK-interacting protein 1, Melanoma differentiation-associated protein 6, MDA-6, p21, CDKN1A, CAP20, CDKN1, CIP1, MDA6, PIC1, SDI1, WAF1
Application Note	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	p21WAF1 (Tumor Suppressor Protein) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDKN1A (HGNC:1784)
Function	Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (PubMed:9106657). 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:11595739). 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

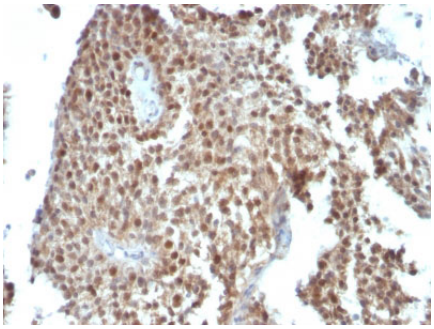
Background

This MAb recognizes a 21kDa protein, identified as the p21WAF1 tumor suppressor protein. This MAb is highly specific to p21 and shows no cross-reaction with other closely related mitotic inhibitors. p21WAF1 is a specific inhibitor of cdk s and a tumor suppressor involved in the pathogenesis of a variety of malignancies. The expression of this gene acts as an inhibitor of the cell cycle during G1 phase and is tightly controlled by the tumor suppressor protein p53. Its expression is induced by the wild type, but not mutant, p53 suppressor protein. Normal cells generally display a rather intense nuclear p21 expression. Loss of p21 expression has been reported in many carcinomas (gastric carcinoma, non-small cell lung carcinoma, thyroid carcinoma).

References

Harper, J.W., et al. 1993. The p21 Cdk-interacting protein Cip1 is a potent inhibitor of G1 cyclin-dependent kinases. Cell 75: 805-816. |

Images



Formalin-fixed, paraffin-embedded human Colon Carcinoma stained with p21 Monoclonal Antibody (SPM306).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.