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Phospho-mouse p21Cip1(S125) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3875a

Product Information

Application	DB, E
Primary Accession	P39689
Other Accession	NP_001129489.1
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB42115
Calculated MW	17785

Additional Information

Gene ID	12575
Other Names	Cyclin-dependent kinase inhibitor 1, CDK-interacting protein 1, Melanoma differentiation-associated protein, p21, Cdkn1a, Cip1, Waf1
Target/Specificity	This mouse p21Cip1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S125 of mouse p21Cip1.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-mouse p21Cip1(S125) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Cdkn1a
Synonyms	Cip1, Waf1
Function	May be involved in p53/TP53 mediated inhibition of cellular proliferation in response to DNA damage. 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 (PubMed:25329316). Inhibits DNA synthesis by DNA polymerase delta by competing with POLD3 for PCNA binding (By similarity). Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (By similarity).

Cellular Location Cytoplasm. Nucleus

Tissue Location Expressed in keratinocytes (at protein level).

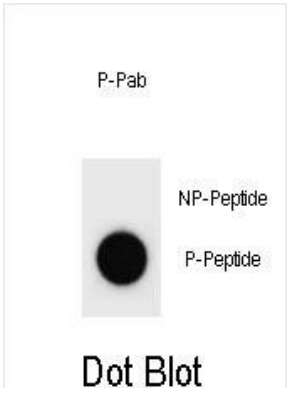
Background

The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activtiy is required for cell cycle G1/S transition. This protein has been shown to interact with and be involved in the phosphorylation of tumor suppressor protein Rb. The CDK4 activity associated with this cyclin was reported to be necessary for cell cycle progression through G2 phase into mitosis after UV radiation. Several transcript variants encoding different isoforms have been found for this gene.

References

Liu, C.Y., et al. Carcinogenesis 31(7):1259-1263(2010)
Kim, J., et al. Cytokine 50(1):42-49(2010)
Kamatani, Y., et al. Nat. Genet. 42(3):210-215(2010)
Gumina, M.R., et al. Cell Cycle 9(4):820-828(2010)
Radulovich, N., et al. Mol. Cancer 9, 24 (2010) :

Images



Dot blot analysis of Mouse p21Cip1 Antibody (Phospho S125) Phospho-specific Pab (Cat. #AP3875a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.