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CDKN2A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1915a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P42771
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1D7D2A1
Isotype	IgG1
Calculated MW	16533
Description	This gene generates several transcript variants which differ in their first exons. At least three alternatively spliced variants encoding distinct proteins have been reported, two of which encode structurally related isoforms known to function as inhibitors of CDK4 kinase. The remaining transcript includes an alternate first exon located 20 Kb upstream of the remainder of the gene; this transcript contains an alternate open reading frame (ARF) that specifies a protein which is structurally unrelated to the products of the other variants. This ARF product functions as a stabilizer of the tumor suppressor protein p53 as it can interact with, and sequester, MDM1, a protein responsible for the degradation of p53. In spite of the structural and functional differences, the CDK inhibitor isoforms and the ARF product encoded by this gene, through the regulatory roles of CDK4 and p53 in cell cycle G1 progression, share a common functionality in cell cycle G1 control. This gene is frequently mutated or deleted in a wide variety of tumors, and is known to be an important tumor suppressor gene.
Immunogen	Purified recombinant fragment of human CDKN2A (AA: 1-156) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	1029
Other Names	Cyclin-dependent kinase inhibitor 2A, isoforms 1/2/3, Cyclin-dependent kinase 4 inhibitor A, CDK4I, Multiple tumor suppressor 1, MTS-1, p16-INK4a, p16-INK4, p16INK4A, CDKN2A, CDKN2, MTS1
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions	CDKN2A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDKN2A (HGNC:1787)
Synonyms	CDKN2, MTS1
Function	Acts as a negative regulator of the proliferation of normal cells by interacting strongly with CDK4 and CDK6. This inhibits their ability to interact with cyclins D and to phosphorylate the retinoblastoma protein.
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Widely expressed but not detected in brain or skeletal muscle. Isoform 3 is pancreas-specific

Background

This gene is a classical cadherin from the cadherin superfamily and is located in a six-cadherin cluster in a region on the long arm of chromosome 16 that is involved in loss of heterozygosity events in breast and prostate cancer. The encoded protein is a calcium-dependent cell-cell adhesion glycoprotein comprised of five extracellular cadherin repeats, a transmembrane region and a highly conserved cytoplasmic tail. Functioning as a classic cadherin by imparting to cells the ability to adhere in a homophilic manner, the protein may play an important role in endothelial cell biology through control of the cohesion and organization of the intercellular junctions. An alternative splice variant has been described but its full length sequence has not been determined. ; ;

References

1. Clin Cancer Res. 2011 Dec 1;17(23):7413-23. 2. Appl Immunohistochem Mol Morphol. 2011 Dec;19(6):562-8.

Images

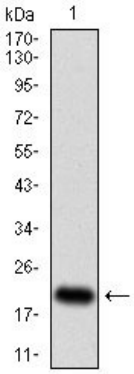
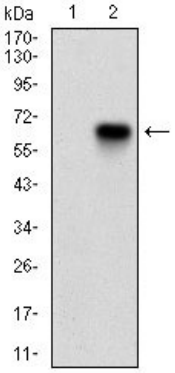


Figure 1: Western blot analysis using CDKN2A mAb against human CDKN2A (AA: 1-156) recombinant protein. (Expected MW is 19 kDa)

Figure 2: Western blot analysis using CDKN2A mAb against HEK293 (1) and CDKN2A (AA: 1-156)-hIgGFc transfected HEK293 (2) cell lysate.



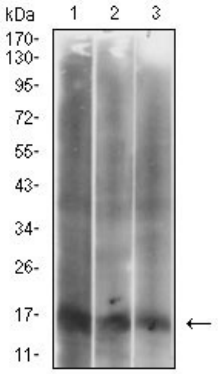


Figure 3: Western blot analysis using CDKN2A mouse mAb against Hela (1), HepG2 (2) and Hek293 (3) cell lysate.

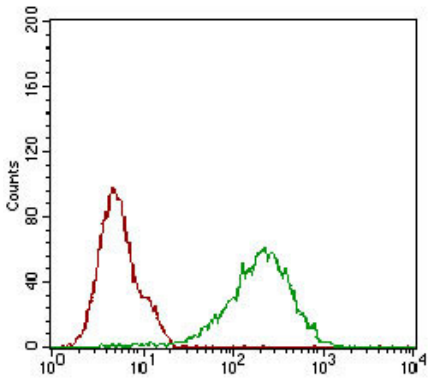


Figure 4: Flow cytometric analysis of Hela cells using CDKN2A mouse mAb (green) and negative control (red).

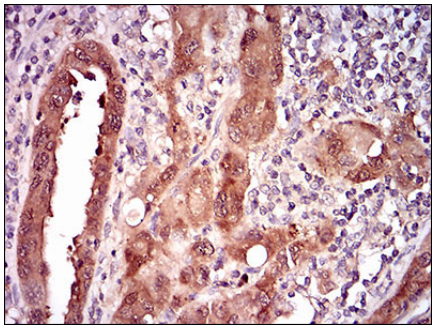


Figure 5: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CDKN2A mouse mAb with DAB staining.

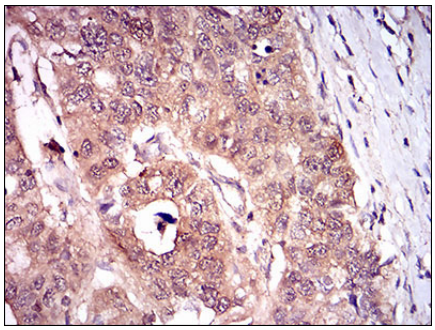


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using CDKN2A mouse mAb with DAB staining.