

**CDKN2A Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1915a****Specification****CDKN2A Antibody - Product Information**

Application	<b>E, WB, FC, IHC</b>
Primary Accession	<a href="#">P42771</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>16.5kDa KDa</b>

**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 CDK4 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.

**CDKN2A Antibody - 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**

E~~1/10000  
WB~~1/500 - 1/2000  
FC~~1/200 - 1/400  
IHC~~1/200 - 1/1000

**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.

### CDKN2A Antibody - 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

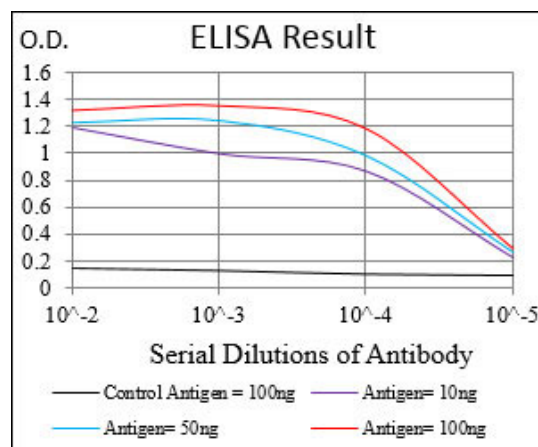
### Tissue Location

Widely expressed but not detected in brain or skeletal muscle. Isoform 3 is pancreas-specific

### CDKN2A Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)



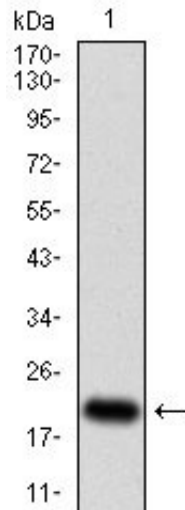


Figure 1: Western blot analysis using CDKN2A mAb against human CDKN2A (AA: 1-156) recombinant protein. (Expected MW is 19 kDa)

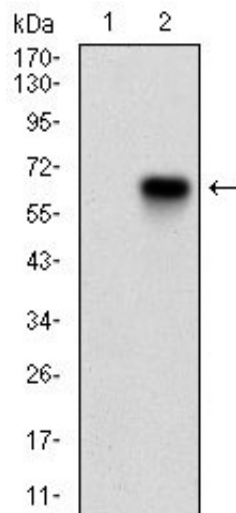


Figure 2: Western blot analysis using CDKN2A mAb against HEK293 (1) and CDKN2A (AA: 1-156)-hlgGfc transfected HEK293 (2) cell lysate.

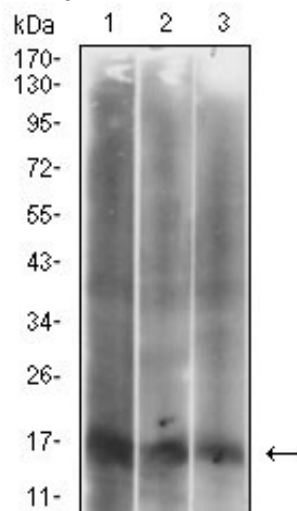


Figure 3: Western blot analysis using CDKN2A mouse mAb against HeLa (1), HepG2 (2) and Hek293 (3) cell lysate.

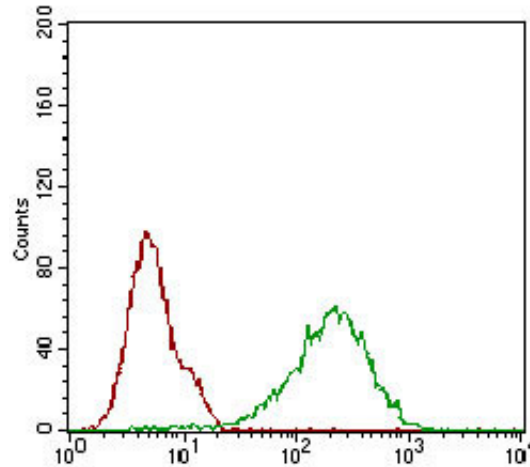


Figure 4: Flow cytometric analysis of Hela cells using CDKN2A mouse mAb (green) and negative control (red).

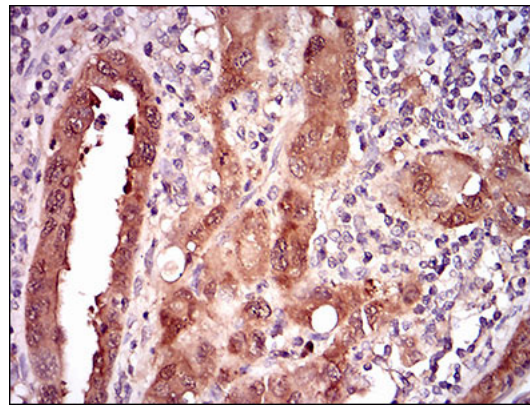


Figure 5: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CDKN2A mouse mAb with DAB staining.

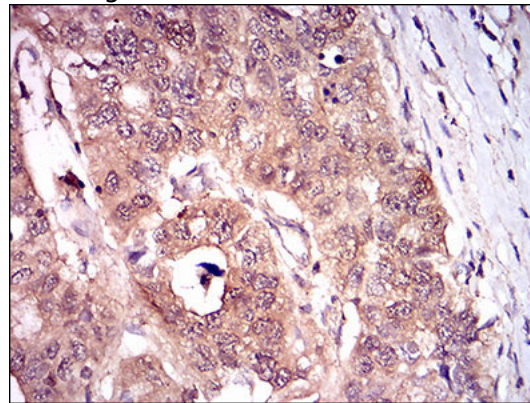


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using CDKN2A mouse mAb with DAB staining.

### CDKN2A Antibody - 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. ; ;

#### **CDKN2A Antibody - References**

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