# Anti-p16INK4a Antibody [A4A3]

### **HA600027**



**Product Type:** Mouse monoclonal IgG1, primary antibodies

Species reactivity: Human

Applications: WB, IHC-P

Molecular Wt: 16 kDa

Clone number: A4A3

**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, the E3 ubiquitin-protein ligase MDM2, 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:** Recombinant protein within human p16INK4a aa 1-156.

Positive control: Hela cell lysates, human ovarian serous carcinoma tissue, human cervical poorly

differentiated adenocarcinoma tissue.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: P42771 Human

**Recommended Dilutions:** 

**WB** 1:500

**IHC-P** 1:100-1:500

Storage Buffer: 1\*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4 °C after thawing. Aliquot store at -20 °C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein G affinity purified.

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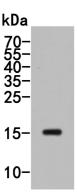
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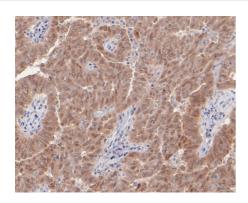
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### **Images**



**Fig1:** Western blot analysis of p16INK4a on Hela cell lysate. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (HA600027, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:5,000 dilution was used for 1 hour at room temperature.



**Fig2:** Immunohistochemical analysis of paraffin-embedded human ovarian serous carcinoma tissue using anti-p16INK4a antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH $_2$ O and PBS, and then probed with the primary antibody (HA600027, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

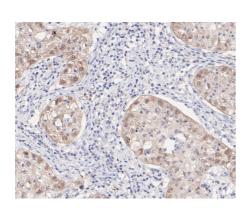


Fig3: Immunohistochemical analysis of paraffin-embedded human cervical poorly differentiated adenocarcinoma tissue using anti-p16INK4a antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA600027, 1/200) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

#### **Background References**

1. Okamoto A. et. al. Mutations and altered expression of p16INK4 in human cancer. Proc. Natl. Acad. Sci. U.S.A. 91:11045-11049(1994).

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