Product Specification Sheet

P16-INK4a antibody

Cat # CDK4H11-A	Rabbit Anti-Human p16-INK4a antibody	**SIZE**: 100 µg
Cat # CDK4M31-A	Rabbit Anti-Mouse p16-INK4a antibody	**SIZE**: 100 µg

p16INK4a (16 kDa Inhibitor of CDK4-a; also MTS1, CDK41 and CDKN2) is a 16 kDa member of the CDKN2 cyclin-dependent kinase inhibitor family of molecules and is a tumor suppressor protein. It is widely expressed (although not in skeletal muscle) and serves as a negative regulator of cell proliferation. It does so by associating with CDK4 or 6, thereby blocking cyclin binding and subsequent Ser/Thr kinase activity. Human p16INK4a is 156 amino acids (aa) in length. It contains four "L" shaped ankyrin repeats (aa 11 139) that interact with cyclin. There are at least two splice variants for p16INK4a. One is termed p12 and shows a 65 aa substitution for aa 52 156; the other simply shows an alternate start site at Met52. Full length human p16INK4a shares 63% aa identity with mouse p16INK4a.

Source of Antigen or Antibodies

Uniprot: CDK4H11-A: P42771 CDK4M31-A: P51480

Host: Rabbit

Clonality: Polyclonal

Purification: Ammonium sulfate followed by peptide affinity purification

Immunogen: Synthetic peptide derived from the C terminal (**CDK4H11-A**) or N terminal (**CDK4M31-A**)

Cross reactivity: The peptide (**CDK4H11-A)** used as an immunogen exhibits 100% homology with Non-human Primates.

The peptide (**CDK4M31-A)** used as an immunogen exhibits 83% homology with Rat.

Subcellular Location: Nucleus

Alternative names: Cyclin-dependent kinase 4 inhibitor A, CDK4I, MTS-1, p16-INK4a

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (**ADI cat#20320)**

Form & Storage of Antibodies

Affinity pure IgG Solution
Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

Lyophilized powder
Lyophilized from a formulation containing PBS, pH 7.4+3% Trehalose. Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at –20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple free/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at –20°C.

Recommended Usage

Western Blotting: 0.5-1.0 µg/ml
Predicted band size: 16.5 kDa

Immunohistochemistry/Immunocytochemistry: Not validated for use in-house. Suggested concentrations are from 1-10 µg/ml.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications. These methods have not been tested by ADI.

This product is for In vitro research use only.

Related materials available from ADI

Catalog#	Description
HP5311-A	Rabbit anti-Human P53 antibody
HP5311-C	Recombinant Human P53 protein control for Western blotting
PCNA11-A	Rabbit Anti-Human Proliferating Cell Nuclear Antigen (PCNA) antibody
PCNA11-C	Recombinant Human Proliferating Cell Nuclear Antigen (PCNA) protein control for Western blotting

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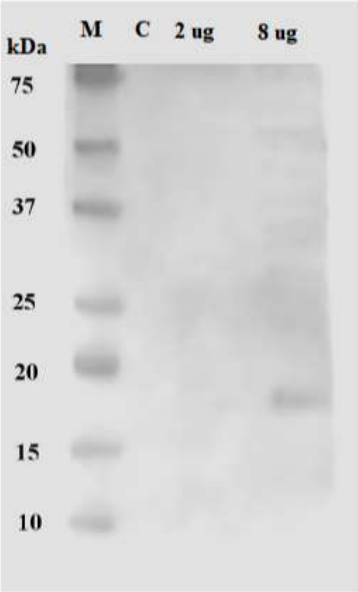

Western blotting: Specificity of the antibody was tested using a HEK293 overexpression lysate. Non-transfected (**C)**, 2 µg, and 8 µg was heated for 5 minutes at 95°C then electrophoretically separated on an 'Any Kd' SDS-PAGE gel (Biorad). The gel was run at 100V for ~1 hour and 30 minutes then transferred to a 0.2 µm nitrocellulose membrane using the 'Low MW' settings on a Transblot Turbo (Biorad). The blot was blocked for 1 hour at room temperature with1% casein. **CDK4H11-A** was diluted with TBST+0.1% BSA to 1 ug/ml and incubated overnight at 4°C. The blot was washed with TBS-T 3 times for 5 minutes each. Goat anti-rabbit IgG HRP (**ADI cat#20320**) was diluted in TBST+0.1% BSA at a 1:10,000 dilution (50 ng/ml) then incubated for 1 hour at room temperature. The blot was washed 3 times with TBS-T for 5 minutes each. The blot was then incubated with ADI Femto ECL substrate (**ADI cat#80210**) for 5 minutes and imaged on a CCD imaging system (C-DiGit, LI-COR). Specific band is observed at ~17 kDa.