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# Anti-p16<sup>INK4A</sup> / DIA-P16-OD

## Mouse monoclonal anti-T cell marker

### Clone JAP16

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#### Product Information

<b>Catalog No.:</b>	DIA-P16-OD	<b>Presentation:</b>	Purified antibody in Tris pH 7.3-7.7 with 1% BSA, <0.1% NaN <sub>3</sub>
<b>Clone:</b>	JAP16	<b>Applications:</b>	Immunohistochemistry (IHC), standard formalin-fixed paraffin sections
<b>Isotype</b>	Mouse IgG2b	<b>Dilutions:</b>	1:100 - 1:200 IHC-P
<b>Quantity</b>	100µl		(General recommendation, validation of antibody performance/protocol is the responsibility of the end user. Positive/negative controls should be run simultaneously with samples)
<b>Specificity:</b>	p16 (INK4A)		
<b>Physical State:</b>	Liquid		
<b>Species</b>			
<b>Reactivity:</b>	Human		
<b>Positive Control:</b>	Cervical Carcinoma		
<b>Visualization:</b>	Cytoplasm and nuclei		

#### Background

Mouse monoclonal anti-p16 antibody clone JAP16 is suitable for the immunohistological detection of p16 in routine-fixed paraffin embedded tissue sections

P16 plays an important role in cell cycle regulation. It is the principal member of the Ink4 family of cyclin-dependent kinase (CDK) inhibitors. Binding of p16 inhibits formation of an active CDK4/6 complex and subsequent phosphorylation of retinoblastoma (Rb) protein. Since phosphorylation of Rb protein is a critical step for cell cycle progression from G1 to S phase, p16-binding to the upstream kinase leads to cell cycle arrest. Consequently, p16 is a negative regulator of cell proliferation and thus, a strong tumor suppressor.

Approx. 50% of all human cancers show p16 inactivation, these include head and neck, esophagus, biliary tract, liver, lung, bladder, colon and breast carcinomas; leukemia; lymphomas; and glioblastomas. Moreover, besides downregulation of p16 in cancer, p16 overexpression has been observed in HPV (human papilloma virus)-related tumors, cervical cancer and head and neck squamous carcinomas. The p16-Rb pathway is a target for viral oncoproteins. The E7 oncoprotein from HPV inactivates Rb. Thus, p16 overexpression in HPV-related tumors reflects cell cycle dysregulation by an unsuccessful attempt to stop cell proliferation.

p16 is used as a diagnostic tool and is an important immunohistochemical in gynecologic pathology.

#### Instructions for Use

##### Immunohistochemical staining of standard formalin-fixed paraffin sections

Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required (pH 9-10 for 10-30 minutes). For immunohistochemical detection different techniques can be used: indirect immunoenzyme labeling with a secondary antibody conjugate, biotin/(strept)avidin-based detection, soluble enzyme immune complex or polymer-based detection. The antibody can be adapted for use on automated staining instruments.

##### Intended use / regulatory status

Europe: For in Vitro Diagnostic Use / All other countries: For Research Use only

#### Storage and Stability

Store at 2-8°C. Do not freeze. The antibody is stable until the date indicated on the label, when stored properly.

#### Safety Notes

The material contains <1% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation and ingestion.



## Figures

### Immunohistochemistry of human p16<sup>INK4A</sup> in routine formalin-fixed paraffin-embedded tissue samples

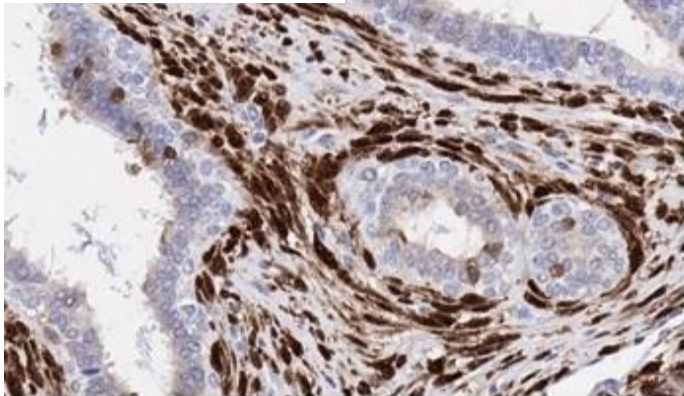
**A:** Intense nuclear p16 staining in mesenchymal components of a phyllodes tumor of breast.

**B:** Cytoplasmic and nuclear p16 staining in a cervical adenocarcinoma.

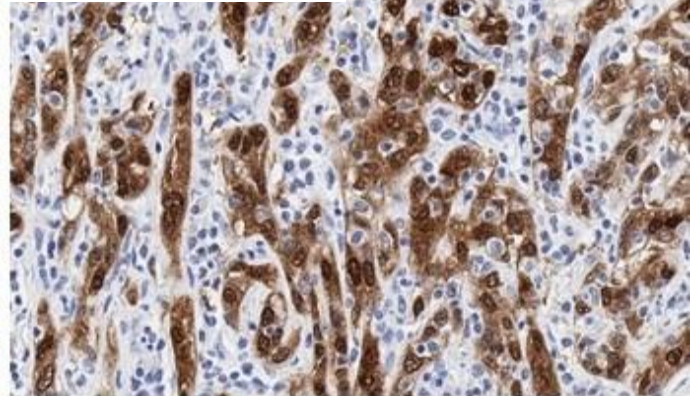
**C:** Diffuse positive signal for p16 in an endometrioid ovarian carcinoma.

**D:** Intense p16 staining in a serous ovarian carcinoma.

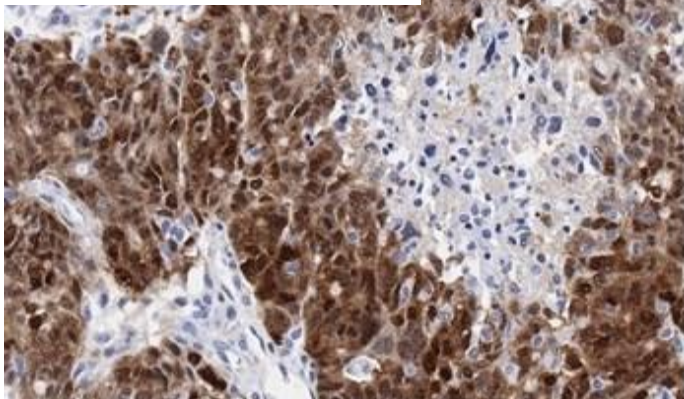
**(A) Phyllodes tumor of breast**



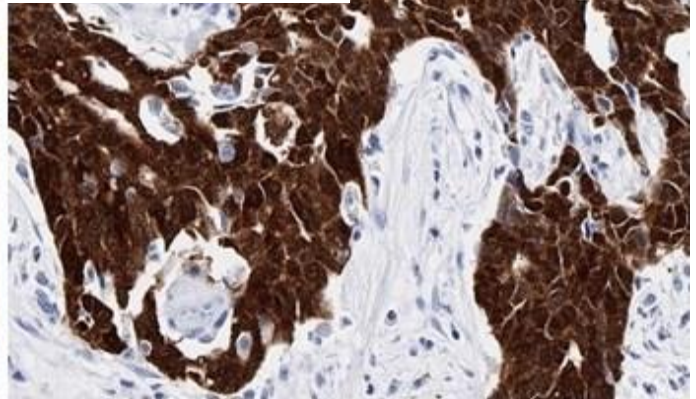
**(B) Cervical adenocarcinoma**



**(C) Endometrioid ovarian carcinoma**



**(D) Serous ovarian carcinoma**



(pictures courtesy of Prof. Guido Sauter, Department of Pathology, University Hospital Eppendorf, Hamburg, Germany)

## References

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