Anti-p16^{INK4A} / DIA-P16-OD
Mouse monoclonal anti-T cell marker
Clone JAP16

Product Information

Catalog No.:	**DIA-P16-OD**
Clone:	JAP16
Isotype	Mouse IgG2b
Quantity	100µl
Specificity:	p16 (INK4A)
Physical State:	Liquid
Species Reactivity:	Human
Positive Control:	Cervical Carcinoma
Visualization:	Cytoplasm and nuclei

Presentation:	Purified antibody in Tris pH 7.3-7.7 with 1% BSA, <0.1% NaN3
Applications:	Immunohistochemistry (IHC), standard formalin-fixed paraffin sections
Dilutions:	1:100 - 1:200 IHC-P (General recommendation, validation of antibody performance/protocol is the responsibility of the end user. Positive/negative controls should be run simultaneously with samples)

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 unsuccessfull 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 an-tibody 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.

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.

For research use only. Not for diagnostic or therapeutic use.

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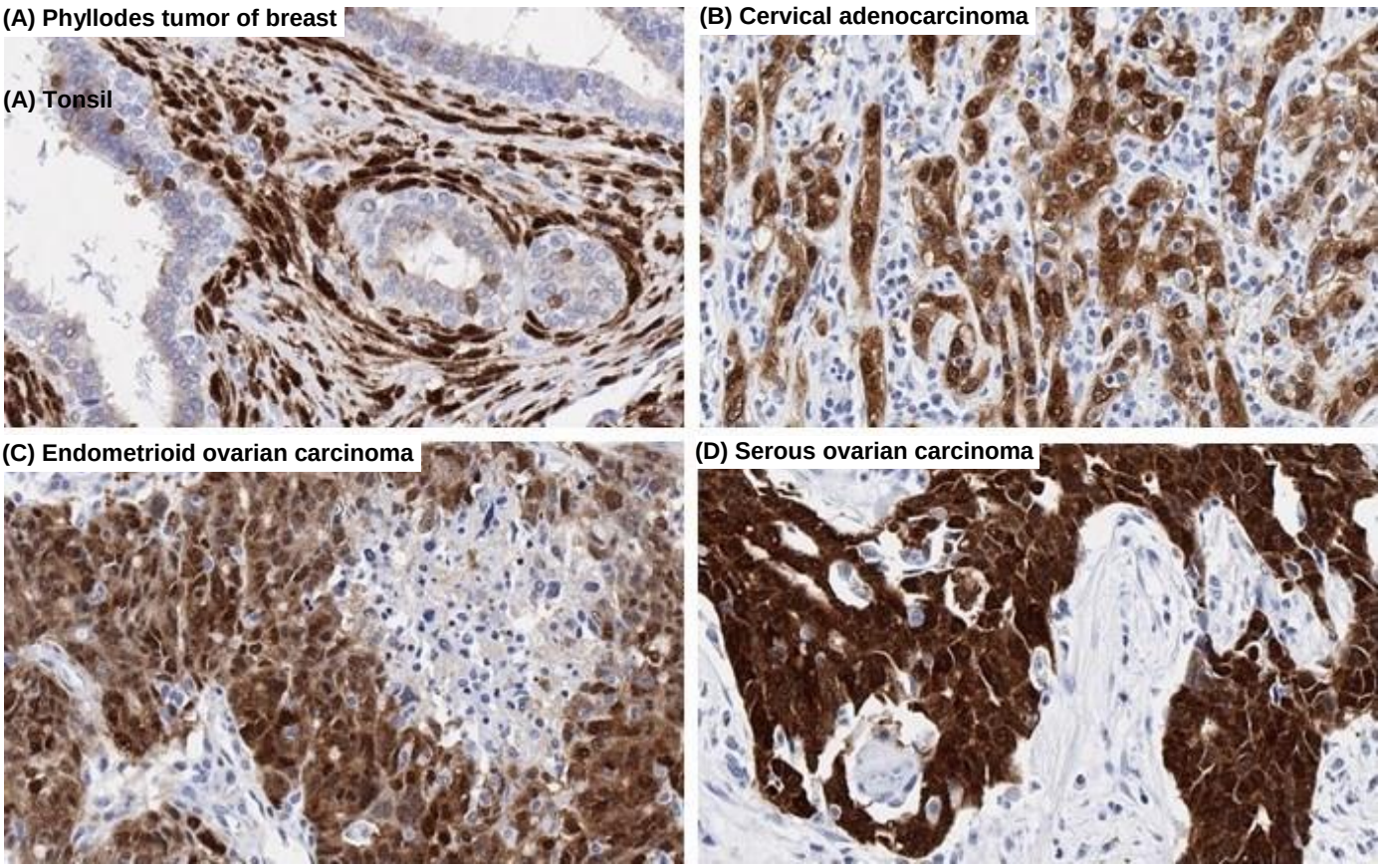
Figures

Immunohistochemistry of human p16 ^{INK4A} 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**.**



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

References

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