

## Anti- P16

Catalog No.	Description
AMC71-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AMC71-10M	10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive™ Detection Systems and i6000™ Automated Staining Systems
MUC71-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
MUC71-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AXC71-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 160 tests
AXC71-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests
AXC71-4M	Ready-to-Use Antibody in Barcode labeled vial for use on the NanoVIP® Staining System, 50 tests

Clone	Species	Ig Class
JC8	Mouse	IgG2a

### Intended Use

**For In Vitro Diagnostic Use.** This antibody is designed for the specific localization of human P16 in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

### Summary and Explanation

p16 INK4A, also designated as CDKN2A or p16, is an important cell cycle regulator and acts as a tumor suppressor that inhibits the catalytic activity of the Cdk4/cyclin D complex. P16 binds to CDK4 and inhibiting its kinase ability, so that it cannot phosphorylate the retinoblastoma tumor suppressor (RB). Without the RB phosphorylation, downstream genes cannot be activated, so the G1/S checkpoint cannot be passed and the cell does not proliferate. Mutations in the gene leads to inactivation of p16 protein which has been associated with an increased risk of cancer and are often observed in primary tumors and in cancer cell lines. Aberrant p16 INK4a have been reported among melanomas, gliomas, esophageal, pancreatic, lung, and urinary bladder carcinomas.

### Storage and Handling

**Store at 2-8°C.** Fresh dilutions, if required, should be prepared prior to use and are stable and steady for up to one day at room temperature (20-26°C). Diluted antibody preparations can be refrigerated or frozen for extended shelf life.

### Principles of the Procedure

Antigen detection by immunohistochemistry (**IHC**) is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The **primary antibody** may be used in IHC using manual techniques or BioGenex Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

### Reagents Provided

Mouse Monoclonal Antibody human P16 is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide.

### Dilution of Primary Antibody

BioGenex Ready-to-Use antibodies have been optimized for use with the recommended BioGenex Detection System and should not require further dilution.

BioGenex concentrated antibodies must be diluted in accordance with the recommended protocol when used with the recommended BioGenex Detection System.

### Recommended Protocol

Refer to the following table for conditions specifically recommended for this antibody. Refer to the BioGenex website for guidance on specific staining protocols or other requirements.

Parameter	BioGenex Recommendations
Control Tissue	Squamous Carcinoma of cervix tissue as available with Biogenex FB-C71M* & FG-C71M*
Recommended Dilution for Concentrated Antibody	<b>1:50-100 in HK941</b>
Recommended Pretreatment (Manual/i6000)**	EZ-AR2 (HK522-XAK)
Recommended Pretreatment (Xmatrx & NanoVIP)	EZ-AR2 Elegance (HX032-YCD & HX046-08XN)
Antibody Incubation (Manual/i6000)	30-60 Min at RT
Antibody Incubation (Xmatrx & NanoVIP)	30-60 Min at 25°C
Detection System for Manual, Xmatrx, NanoVIP & i6000 systems***	Use BioGenex Two-Step <b>OR</b> One-Step Super Sensitive™ Polymer-HRP IHC Detection System/DAB; see p. 2 for more information

\*FB: positive control micro chamber slides, FG: positive control microscopic slides. Xmatrx & NanoVIP requires micro chamber slides.

Category	Antibodies	Revision No.	B
Document No.	932-C71M-EN	Release Date	28-Jun-2024

\*\*Pretreatment times will vary based on individual microwave power.  
\*\*\*For automation systems (Xmatrx-Elite, NanoVIP & i6000 Diagnostics), refer to the factory protocols provided with the instrument.

Experimental results should be confirmed by a medically-established diagnostic product or procedure.

Detection System	Two-Step HRP Kit	One-Step HRP Kit	Link and Label Kit
Manual	QD440-XAKEN (1000 Test)	QD630-XAKEN (1000 Test)	QP300-XAKE (1000 Test)
	QD430-XAKEN (1000 Test)		
	QD420-YIKEN (500 Test)	QD620-XAKEN (500 Test)	QP900-9LE (500 Test)
	QD400-60KEN (60 Test)		
Xmatrx - Automation	QD550-YCDEN (200 Test)	QD610-YADEN (200 Test)	N/A
NanoVIP- Automation	QD551-YCDEN (100 Test)	QD611-YADEN (100 Test)	N/A
i6000 - Automation	QD410-YAXEN (200 Test)	QD610-YAXEN (200 Test)	N/A
For more information, visit <a href="http://www.biogenex.com">www.biogenex.com</a> .			

### Limitations of the Procedure

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results.

### Bibliography

- LaPak, K.M. and Burd, C.E. (2014) *Mol Cancer Res* 12, 167-83.
- Ishikawa, M. et al. *Int J Gynecol Cancer* 16, 347-53.
- Romagosa, C. et al. (2011) *Oncogene* 30, 2087-97.

### Precautions

This product contains sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at the product concentrations, but proper handling protocols should be observed. For more information, a Safety Data Sheet (SDS) for sodium azide is available upon request. Dispose of unused reagents according to Local, State and Federal Regulations. Wear suitable Personal Protective Equipment, do not pipette reagents by mouth, and avoid contact of reagents and specimens with skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with copious amounts of water.

### Quality Control

Refer to BioGenex detection system documents for guidance on general quality control procedures.

### Troubleshooting

Refer to the troubleshooting section in the documentation for BioGenex Detection Systems (or equivalent detection systems) for remedial actions on detection system related issues, or contact BioGenex Technical Support Department at 1-800-421-4149 or [support@biogenex.com](mailto:support@biogenex.com) or your local distributor to report unusual staining.

### Expected Results

This antibody stains cytoplasm and nucleus in positive cells in formalin-fixed, paraffin embedded tissue sections. An example image of a tissue section stained with this antibody can be found on the product page on the BioGenex website. Interpretation of the staining result is solely the responsibility of the user.

	Temperature Limitation		In Vitro Diagnostic Medical Device
	Use By Date		Batch Code
	Non-Sterile		Consult Instructions for Use
	Representative in the European Community		Manufacturer

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