

## Anti-Cytokeratin 17

Catalog No.	Description
AM981-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AM981-10M	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
MU981-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
MU981-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AX981-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 160 tests
AX981-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests
AX981-4M	Ready-to-Use Antibody in Barcode labeled vial for use on the NanoVIP® Staining System, 50 tests

Clone	Species	Ig Class
KRT17/778	Mouse	IgG2

### Intended Use

**For Research Use.** This antibody is designed for the specific localization of human Cytokeratin 17 in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

### Summary and Explanation

Cytokeratin 17 is a type 1 keratin found in epidermal appendages and contains 432 amino acids. Cytokeratin 17 modulates the function of TNF-alpha in the specific context of hair cycling. This protein regulates protein synthesis and epithelial cell growth through binding to the adapter protein SFN and by stimulating Akt/mTOR pathway (By similarity) and is involved in tissue repair. Cytokeratin 17 also promotes cell proliferation and migration of cells therefore signaling its role in the expansion of tumor/cancerous cells (especially oral squamous cell carcinoma). Cytokeratin 17 may also be useful in distinguishing carcinomas of the cervix from those of the colon and also from mesotheliomas. Through Immunohistochemistry staining, expression of Cytokeratin 17 is seen in the membrane and cytoplasm of squamous cell 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 to human Cytokeratin 17 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	Cervical Cancer tissue as available with Biogenex FB-981M* & FG-981M*
Recommended Dilution for Concentrated Antibody	<b>1:50 in HK941</b>
Recommended Pretreatment (Manual/i6000)**	EZ-AR2 (HK522-XAK)
Recommended Pretreatment (Xmatrx & Nano VIP)	EZ-AR2 Elegance (HX032-YCD & HX046-08XN)
Antibody Incubation (Manual/i6000)	30-60 Min at RT
Antibody Incubation (Xmatrx & Nano VIP)	45-60 Min at 25°C
Detection System for Manual, Xmatrx, Nano VIP & 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 non-barrier slides. Xmatrx & Nano VIP requires micro chamber slides.

\*\*Pretreatment times will vary based on individual microwave power.

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\*\*\*For automation systems (Xmatrix-Elite, Nano VIP & i6000 Diagnostics), refer to the factory protocols provided with the instrument.

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)		
Xmatrix - 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 [www.biogenex.com](http://www.biogenex.com).

### 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 membrane /cytoplasm 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.

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

### 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

- Tong XI and Coulombe PA. "Keratin 17 modulates hair follicle cycling in a TNFalpha-dependent fashion". *Genes Dev.* 2006 May 15;20(10):1353-64.
- Khanom R et al. "Keratin 17 Is Induced in Oral Cancer and Facilitates Tumor Growth". *PLoS One.* 2016 Aug 11;11(8):e0161163.
- Escobar-Hoyos LF et al. "Keratin-17 Promotes p27KIP1 Nuclear Export and Degradation and Offers Potential Prognostic Utility". *Cancer Res.* 2015 Sep 1;75(17):3650-62.
- Karantza V. "Keratins in health and cancer: more than mere epithelial cell markers". *Oncogene.* 2011 Jan 13;30(2):127-38.
- Frank Smedts et al. "Keratin Expression in Cervical Cancer" *American Journal of pathology.* 1992 Aug 2;141(2):497-511.

	Temperature Limitation	<b>RUO</b>	Research Use only
	Use By Date	<b>LOT</b>	Batch Code
	Non-Sterile		Consult Instructions for Use
	Manufacturer,		

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