

## Anti-Human PMS2

Catalog No.	Description
AN844-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AN844-10M	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
NU844-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
NU844-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AY844-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 160 tests
AY844-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests

Clone	Species	Ig Class
EP51	Rabbit	IgG

### Intended Use

**For In Vitro Diagnostic Use.** This antibody is designed for the specific localization of PMS2 in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

### Summary and Explanation

PMS2, a mismatch repair endonuclease, is a member of a family of genes involved in DNA mismatch repair. Carriers of the mismatch repair gene mutations have a high lifetime risk of developing Hereditary Non-Polyposis Colon Cancer (HNPCC) and several other cancers including endometrial cancer due to microsatellite instability (MSI) caused by accumulation of DNA replication errors in proliferating cells. Along with MLH1, MSH2 and MSH6, PMS2 antibody is helpful in diagnosis of MSI. An IHC study conducted by Mayo clinic on 535 cases with MSIhigh, 90% of the tumors showed loss of MLH1, MSH2 and/or MSH6 expression, while 70% of the remaining cases showed isolated loss of PMS2 expression. The loss of PMS2 was associated with young age of diagnosis and right-sided location but not with a striking family history of cancer. Endometrial carcinomas are the most common non-colorectal cancers occur in HNPCC. The most common IHC abnormality in endometrial carcinomas with MSI was concurrent loss of MLH1/PMS2. Adding of PMS2 and MSH6 to MLH1 and MSH2 antibodies increased sensitivity for diagnosis of MSI. Tumors with low-level MSI show unfavorable pathological characteristics compared to tumors with no and tumors with high-level MSI.

### 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

Rabbit Monoclonal Antibody PMS2 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	Colon carcinoma tissue as available with Biogenex FB-844N* & FG-844N*
Recommended Dilution for Concentrated Antibody	<b>1:10-20 in HK941</b>
Recommended Pretreatment (Manual/i6000)**	EZ-AR1 (HK521-XAK)
Recommended Pretreatment (Xmatrx)	EZ-AR1 Elegance (HX031-YCD)
Antibody Incubation (Manual/i6000)	30-60 Min at RT
Antibody Incubation (Xmatrx)	30-60 Min at 25°C
Detection System for Manual, Xmatrx & i6000 systems***	Use BioGenex Two-Step <b>OR</b> One-Step Super Sensitive™ Polymer-HRP IHC Detection System/DAB; see p. 2 for more

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information
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\*FB: positive control micro chamber slides, FG: positive control microscopic slides. Xmatrx requires micro chamber slides.  
\*\*Pretreatment times will vary based on individual microwave power.  
\*\*\*For automation systems (Xmatrx-Elite & 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)		
Xmatrx - Automation	QD550-YCDEN (200 Test)	QD610-YADEN (200 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 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

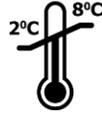
result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure.

### 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

- Garg K, et al.: J Clin Pathol 2009, 62:679-684
- Gill S, et al.: Clin Cancer Res 2005, 11:6466-6471
- Modica I, et al.: Am J Surg Pathol 2007, 31:744-751
- Shia J, et al.: Am J Surg Pathol 2009, 33:1639-1645
- Kets CM, et al.: Mod Pathol 2006, 19:1624-1630

	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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