



Rev: A

Release Date: 04/13/2014

IVD

PMS2(EP51)

Clone	EP51
Source	Rabbit Monoclonal
Cat #	PR067-6ml RTU PR067-3ml RTU CR067-0.5ml Concentrated CR067-0.1ml Concentrated
Regulatory Status	IVD

Intended Use:

This antibody is intended for use to qualitatively identify specific antigen by light microscopy in formalin fixed, paraffin embedded tissue sections using immunohistochemical detection methodology. Interpretation of any positive or negative staining must be complemented with the evaluation of proper controls and must be made within the context of the patient's clinical history and other diagnostic tests. A qualified pathologist must perform evaluation of the test.

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 MSI-high, 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.

Immunogen: A synthetic peptide corresponding to residues in human PMS2 protein

Isotype: Rabbit IgG

Reagent Provided:

Concentrated format: Antibody to PMS2 is affinity purified and diluted in antibody diluent, with 1% bovine serum albumin (BSA) and 0.05% sodium azide (NaN₃).
Recommended dilutions: 1:50 – 1:100.
The antibody dilution and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by individual laboratory.

Pre-diluted format: PathnSitu ready to use antibodies are pre tittered to optimal staining conditions. Further dilution may loose the activity and may yield to sub optimal staining conditions.

Storage Recommendations:Store at 2-8 °C. Do not use after expiration date provided on the vial.

Staining Recommendations:

Antigen Retrieval Solution: Use **EDTA Buffer (PathnSitu cat # PS008)** as antigen retrieval solution. Heat Retrieval Method: Retrieve sections under steam pressure for 15 min using PathnSitu's MERS (Multi Epitope Retrieval System) then allow solution to cool for 10 minutes then transfer tissue sections/slides to distilled water.

Primary Antibody: Cover the tissue sections with primary antibody and incubate for 30 min at room temperature when used PathnSitu PolyExcel Detection System.

Detection System: Refer to PathnSitu PolyExcel detection system protocol or manufacturer's detection kit staining protocol when used other vendor detection system.

Cellular Localization: Nucleus

Positive Control: Colon

Troubleshooting: Follow the antibody specific protocol recommendations according to data sheet provided. If unusual results occur, contact PathnSitu Technical Support at 040-2701 5544 or techsupport@pathnsitu.com.

Limitations and Warranty: There are no warranties, expressed or implied, which extend beyond this description. PathnSitu is not liable for property damage, personal injury, or economic loss caused by this product.

Bibliography:

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

PMS2, EP51 antibody has been created by Epitomics Inc., using Epitomics' proprietary rabbit monoclonal antibody technology covered under Patent No.'s 5,675,063 and 7,402,409.