Solution for 1 minute. Rinse with deionized water. Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Counterstain:

RT with Biocare's Warp Red.

Incubate for 5 minutes at RT with Biocare's DAB - OR - Incubate for 5-7 minutes at Chromogen:

Polymer:

Incubate for 10 minutes at RT with a secondary probe.

Primary Antibody:

Incubate for 30-60 minutes at RT.

Probe: Incubate for 10 minutes at RT with a secondary probe.

Polymer: Incubate for 10 minutes at RT with a tertiary polymer.

Chromogen:

Incubate for 5 minutes at RT with Biocare's DAB - OR - Incubate for 5-7 minutes at RT with Biocare's Warp Red.

Counterstain:

Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

### PMS2

**Concentrated and Prediluted Monoclonal Antibody**

**Control Number:** 902-344-082417

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Dilution</th>
<th>Diluent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 344 AK, BK</td>
<td>0.1, 0.5 ml, concentrated</td>
<td>1:50-1:100</td>
<td>Renoir Red</td>
</tr>
<tr>
<td>APR 344 AA</td>
<td>6.0 ml, prediluted</td>
<td>Ready-to-use</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Intended Use:**
For Research Use Only. Not for use in diagnostic procedures.

**Summary and Explanation:**
The PMS2 post meiotic segregation increased 2 gene is located on chromosome number 7. The gene product of PMS2 forms a heterodimer with MLH1 that interacts with MSH2 bound to mismatched bases in DNA. MSH2 is a protein of 934 aa (100 kDa) localized to the cell nucleus. MSH2 functions as one of the four major DNA mismatch repair genes along with PMS2, MLH1 and PMS1. Mutations in these genes are associated with hereditary nonpolyposis colon cancer (HNPPC), one of the most common hereditary diseases in man. Immunohistochemistry studies have further determined that the microsatellite instability phenotype in endometrial carcinoma is linked to defects in the MLH1/PMS2 gene.

**Source:** Mouse monoclonal

**Species Reactivity:** Human; others not tested

**Clone:** A16-4

**Isotype:** IgG1/k

**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig concentration.

**Epitope/Antigen:** PMS2

**Cellular Localization:** Nuclear

**Positive Control:** Placenta, colon cancer

**Known Applications:**
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

**Supplier As:** Buffer with protein carrier and preservative
Renoir Red Diluent (BRR904)

**Storage and Stability:**
Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC.

**Protocol Recommendations:**

**Peroxide Block:** Block for 5 minutes with Biocare's Peroxidazed 1.

**Pretreatment Solution (recommended):** Reveal or Borg

**Pretreatment Protocol:**
Heat Retrieval Method:
Retrieve sections under pressure using Biocare's Decloaking Chamber, followed by a wash in distilled water; alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.

**Protein Block (Optional):** Incubate for 5-10 minutes at RT with Biocare's Background Quencher

**Primary Antibody:** Incubate for 30-60 minutes at RT.

**Probe:** Incubate for 10 minutes at RT with a secondary probe.

**Polymer:** Incubate for 10 minutes at RT with a tertiary polymer.

**Chromogen:**
Incubate for 5 minutes at RT with Biocare's DAB - OR - Incubate for 5-7 minutes at RT with Biocare's Warp Red.

**Counterstain:**
Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

**Technical Note:**
This antibody has been standardized with Biocare's MACH 4 detection system. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS buffer for washing steps.

**Limitations:**
This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitable for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

**Precautions:**
1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (6)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water. (7)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at http://biocare.net/.

**Technical Support:**
Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

**References:**