S100 Protein [4C4.9] (M)
Concentrated and Prediluted Monoclonal Antibody
901-3237-121019

<table>
<thead>
<tr>
<th>Catalog Number:</th>
<th>Description:</th>
<th>Dilution:</th>
<th>Diluent:</th>
<th>Intended Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACI 3237 A, C</td>
<td>0.1, 1.0 mL, conc.</td>
<td>1:100</td>
<td>Da Vinci Green</td>
<td>For In Vitro Diagnostic Use</td>
</tr>
<tr>
<td>API 3237 AA, H</td>
<td>6.0, 25 mL, RTU</td>
<td>Ready-to-use</td>
<td>N/A</td>
<td>S100 Protein [4C4.9] (M) is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of S100 protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient’s clinical history and other diagnostic tests by a qualified pathologist.</td>
</tr>
<tr>
<td>VLTM 3237 G20</td>
<td>20 mL, RTU</td>
<td>Ready-to-use</td>
<td>N/A</td>
<td>S100 recognizes proteins of 21-24 kDa, identified as the A and B subunits of S100 protein. S100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S100A is composed of an alpha and beta chain whereas S100B is composed of two beta chains. S100 protein is expressed in Schwannomas, ependymomas, astroglomas, and nearly all melanomas (benign and malignant) and their metastases (1-6). Studies have also shown S100 protein is expressed in Langerhans cell tumors and interdigitating dendritic cell tumor/sarcoma (IDCT) (7). Langerhans Cell Histiocytosis (also known as histiocytosis X, eosinophilic granuloma, or Langerhans cell granulomatosis) can also be confirmed by S100 staining (8).</td>
</tr>
</tbody>
</table>

 Protocol Recommendations (VALENT® Automated Slide Staining Platform):
VLTM3237 is intended for use with the VALENT. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Manager should be programmed as follows:
- DAB Chromogen Staining Option:
  Deparafricanization: Deparaffinize for 8 minutes with Val DePar.
  Pretreatment: Perform heat retrieval at 98°C for 60 minutes using Val AR-Lo pH, 5X (use at 1X).
  Peroxidase Block: Block for 5 minutes with Val Peroxidase Block.
  Protein Block: Incubate for 10 minutes at RT with Val Background Block.
  Primary Antibody: Incubate for 30 minutes.
  Secondary Antibody: Incubate for 10 minutes with Val Mouse Secondary.
  Linker: Incubate for 10 minutes with Val Universal Linker.
  Polymer: Incubate for 10 minutes with Val Universal Polymer.
  Chromogen: Incubate for 5 minutes with Val DAB.
- Red Chromogen Staining Option:
  Deparafricanization: Deparaffinize for 8 minutes with Val DePar.
  Pretreatment: Perform heat retrieval at 98°C for 60 minutes using Val AR-Lo pH, 5X (use at 1X).
  Peroxidase Block: Block for 5 minutes with Val Peroxidase Block.
  Protein Block: Incubate for 10 minutes with Val Background Block.
  Primary Antibody: Incubate for 30 minutes.
  Secondary Antibody: Incubate for 10 minutes with Val Mouse Secondary.
  Linker: Incubate for 10 minutes with Val Universal Linker.
  Polymer: Incubate for 10 minutes with Val Universal Polymer.
  Chromogen: Incubate for 5 minutes with Val Hematoxylin.
- Protocol Recommendations (intelliPATH FLX® and manual use):
  Peroxide Block: Block for 5 minutes with Peroxidazed 1.
  Pretreatment: Perform heat retrieval using Diva Decloaker. Refer to the Diva Decloaker data sheet for specific instructions.
  Protein Block (Optional): Incubate for 5-10 minutes at RT with Val Background Punisher.
  Primary Antibody: Incubate for 30 minutes at RT.
  Probe: Incubate for 10 minutes at RT with a secondary probe.
  Polymer: Incubate for 10-20 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 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, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

Limitations:
The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titters are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.

Summary
Pathologist.

Storage and Stability:
Store at 2°C to 8°C. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.
Quality Control:

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) (9)
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 into contact with sensitive areas, wash with copious amounts of water. (10)
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.

Troubleshooting:
Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

References: