Kappa (M) + Lambda (P)
Prediluted Multiplex Antibody Reagent

Catalog Number: API 3159 DS AA
Description: 6.0 ml, prediluted
Dilution: Ready-to-use
Diluent: N/A

Intended Use:
For In Vitro Diagnostic Use
Kappa (M) + Lambda (P) is a cocktail of mouse monoclonal and rabbit polyclonal antibodies that is intended for laboratory use in the qualitative identification of kappa and lambda immunoglobulin light chain proteins 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.

Summary and Explanation:
Kappa and Lambda antibodies are usually run together on two separate tissues. In normal tissue, the Kappa and Lambda cell ratio is approximately 2:1. The double stain antibody allows the investigator to simultaneously see both Kappa (M) (brown) and Lambda (P) (red) on the same tissue section, thus allowing the end-user a more accurate and easier assessment of both stains.

The antibody cocktail recognizes both Kappa and Lambda light chains. It is reportedly useful in the identification of myelomas, plasmacytomas, and certain non-Hodgkin's lymphomas. The most common feature of these malignancies is the restricted expression of a single light chain class. Demonstration of clonality in lymphoid infiltrates may indicate that the infiltrate is malignant.

Principle of Procedure:
This product is a primary antibody cocktail of mouse and rabbit antibodies, which may be used in a Multiplex IHC staining procedure to produce a two-color stain. Following application of the primary antibody cocktail to the tissue sample, detection is performed by separate secondary antibodies specific for each species (i.e. mouse or rabbit) of the primary antibody cocktail, which are conjugated to horseradish peroxidase (HRP) or alkaline phosphatase (AP) enzymes. Visualization is accomplished by the application of chromogenic substrates (DAB and Warp Red), which are enzymatically activated (by HRP or AP, respectively) to produce a colored reaction product at the antigen site. The specimen may be counterstained and coverslipped. Results are interpreted using a light microscope.

Reagent Provided:
Kappa (M) + Lambda (P) is provided as a prediluted antibody cocktail of anti-kappa and anti-lambda antibodies, in buffer with carrier protein and preservative.

<table>
<thead>
<tr>
<th>Antibody</th>
<th>anti-kappa</th>
<th>anti-lambda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clone</td>
<td>L1C1</td>
<td>N/A</td>
</tr>
<tr>
<td>Source</td>
<td>Mouse monoclonal</td>
<td>Rabbit polyclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG1</td>
<td>IgG</td>
</tr>
<tr>
<td>Epitope/Antigen</td>
<td>kappa light chain</td>
<td>lambda light chain</td>
</tr>
<tr>
<td>Cellular Localization</td>
<td>Cytoplasmic</td>
<td>Cytoplasmic</td>
</tr>
<tr>
<td>Staining</td>
<td>Brown (DAB)</td>
<td>Red (Warp Red)</td>
</tr>
</tbody>
</table>

Storage and Stability:
Store at 2°C to 8°C. Do not use reagent after the expiration date printed on the vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Species Reactivity: Human; others not tested
Positive Tissue Control: Tonsil or bone marrow

Protocol Recommendations:
Peroxide Block: Block for 5 minutes with Biocare's Peroxidazed 1.
Pretreatment: Perform heat retrieval using Biocare's Reveal Decloaker. Refer to the Reveal Decloaker product data sheet for specific instructions.
Protein Block: Incubate for 10 minutes at RT with Biocare's Background Punisher.
Primary Antibody: Incubate for 30 minutes at RT.
Double Stain Detection: Incubate for 30 minutes at RT using Biocare's MACH 2 Double Stain 2.
Chromogen (1): Incubate for 5 minutes at RT with Biocare's Betazoid DAB.
Chromogen (2): Incubate for 5-7 minutes at RT with Biocare's Warp Red. Rinse in deionized water.
Counterstain: Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

Technical Notes:
This antibody has been standardized with Biocare's MACH 2 Double Stain 2. Use TBS buffer for washing steps.

Limitations:
The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixed, 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 titers listed 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. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

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) (5)
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. (6)
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.
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Control Number: 901-3159DS-090617

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: