CD138 + Ki-67
Prediluted Multiplex Antibody Reagent
Control Number: 901-3169DS-090817

Catalog Number: API 3169 DS AA
Description: 6.0 ml, prediluted
Dilution: Ready-to-use
Diluent: N/A

Intended Use:
For In Vitro Diagnostic Use
CD138 + Ki-67 is a cocktail of mouse monoclonal and rabbit monoclonal antibodies that is intended for laboratory use in the qualitative identification of CD138 and Ki-67 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.

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.

Summary and Explanation:
CD138/syndecan-1 is an excellent marker for identifying plasma cells, as CD138 is a transmembrane heparin proteoglycan present on the surface membrane of plasma cells that remains active in formalin-fixed paraffin-embedded bone marrow sections. Other hematopoietic cells, endothelial cells and lymphoplasmacytoid lymphomas in bone marrow are CD138 negative (1). CD138 is also expressed in fibroblasts, keratinocytes and normal hepatocytes (1).

The Ki-67 antibody identifies a nuclear antigen, which is associated with cell proliferation. It is found throughout the cell cycle in the G1, S, G2, and M phases; but not in the GO phase. It is commonly used to grade the proliferation index of tumors (2).

As CD138 is localized to the cell membrane, it can be paired with nuclear prognostic markers, such as Ki-67, in double-marker immunostaining reactions without overlap of the chromogenic signals. In multiple myeloma, a CD138 + Ki-67 IHC double stain was shown to be more sensitive and accurate for myeloma cell proliferation assessment than cytogenetic methods (3).

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 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 (Deep Space Black and Warr 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:
CD138 + Ki-67 is provided as a prediluted antibody cocktail of anti-CD138 and anti-Ki-67 antibodies in buffer with carrier protein and preservative.

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

Protocol Recommendations:

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) (4)
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. (5)
Precautions Cont’d:
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: