Lung Adeno-2™ (TTF-1 + Napsin A)
Prediluted Multiplex Cocktail (4-Step)
Control Number: 901-394DS-021710

Catalog Number: PPM 394 DS AA
Description: 6.0 ml, prediluted
Dilution: Ready-to-use
Diluent: N/A

Intended Use:
For In Vitro Diagnostic Use

Summary and Explanation:
TTF-1 has been the premier marker for lung adenocarcinoma. A new and promising marker, Napsin A, is expressed in type II pneumocytes and in adenocarcinomas of the lung. Studies have shown Napsin A to be more sensitive and specific than TTF-1 in lung adenocarcinomas and virtually negative in all squamous carcinomas. In other studies comparing TTF-1 and SP-A, Napsin A stained more tumor cells and a higher percentage of lung adenocarcinomas than either of these antibodies. Other studies have shown that when TTF-1 and Napsin A are used in combination, a higher sensitivity and specificity is achieved. A critical assessment is essential for correct diagnosis as patients with squamous carcinoma (SqCC) cannot receive Avastin due to a 30% mortality rate as a result of fatal hemoptysis (hemorrhaging). Therefore, when used in a panel with p63 and CK5, this unique antibody cocktail of TTF-1 and Napsin A should prove useful for immunohistochemical analysis of poorly differentiated lung adenocarcinomas versus squamous cell carcinomas in formalin-fixed paraffin-embedded tissues.

Principle of Multiplex Staining:
A Multiplex IHC stain can be accomplished in four major steps. The initial step consists of an antibody cocktail with at least one mouse and one rabbit antibody. This cocktail is applied to the tissue and will bind with two or more target antigens. A multiplex detection cocktail of horseradish peroxidase (HRP) and alkaline phosphatase (AP) conjugated secondary antibodies is applied. The third step consists of the addition of DAB-Substrate that binds to the HRP and produces a brown chromogenic reaction product. The fourth step consists of a Fast Red-Substrate that binds to the AP and produces a red chromogenic reaction product.

Source: Mouse monoclonal and Rabbit polyclonal

Species Reactivity: Human, others not tested

Clone: 8G7G3/1 + NA

Isotype: IgG1 + Rabbit IgG

Epitope/Antigen: TTF-1 + Napsin A

Cellular Localization:
TTF-1: (Nuclear): Brown
Napsin A: (Cytoplasmic-granular): Red

Positive Control: Lung adenocarcinoma

Normal Tissue: Lung or thyroid

Abnormal Tissue: Lung adenocarcinoma

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

Supplied As: Buffer with protein carrier and preservative.

Storage and Stability:
Store at 2°C to 8°C. 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 2°C to 8°C.

Protocol Recommendations

Peroxide Block:
Block for 5 minutes with BIOCARE's PEROXIDAZED 1.

Pretreatment Solution (recommended): Diva

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

Primary Antibody:

Protein Block:
Optional: Incubate for 10-20 minutes at RT with BIOCARE's Background Sniper.

Primary Antibody:

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 when using BIOCARE's Betazoid DAB.

Chromogen (2):
Incubate for 10-20 minutes at RT with BIOCARE's Vulcan Fast Red. Rinse in deionized water.

Counterstain:
Rinse with deionized water. Incubate for 30-60 seconds with Hematoxylin. Rinse with deionized water. Apply Tacha's Bluing solution for 1 minute.

Technical Note:
This antibody has been standardized with BIOCARE's MACH 2 Double Stain 2. It can also be used on an automated staining system. Use TBS buffer for washing steps.

Performance Characteristics:
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 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. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

Quality Control:
Refer to NCCLS Quality Assurance for Immunocytochemistry approved guidelines, December 1999 MM44A Vol.19 No.26 for more information about Tissue Controls.

Precautions:
This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. C.F. 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)

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.

Microbial contamination of reagents may result in an increase in nonspecific staining. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change. The MSDS is available upon request.

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

References:
5. Annika Dejmek, Pontus Naucler, et al. Napsin A (TA02) is a useful alternative to thyroid transcription factor-1 (TTF-1) for the identification of pulmonary adenocarcinoma cells in pleural effusions. Diagnostic Cytopathology, Vol 35, No. 8; pp.493-7