Napsin A (P), 2X

Prediluted Polyclonal Antibody

Control Number: 901-3073-082214

ISO 9001&13485 CERTIFIED

Catalog Number: **API 3073 AA**

Description: 6.0 ml, prediluted

Dilution: Ready-to-use

Diluent: N/A

Intended Use:

For In Vitro Diagnostic Use

Napsin A (P), 2X is a rabbit polyclonal antibody that is intended for laboratory use in the qualitative identification of Napsin A protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human lung 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:

Napsin A is a pepsin-like aspartic proteinase expressed in type II pneumocytes of normal lung and in adenocarcinomas of the lung and kidney (1). Napsin A has been shown to be a sensitive (79-86%) marker for lung adenocarcinoma (1-5). Studies have shown that Napsin A may be more specific (100%) for lung adenocarcinoma vs. lung squamous cell carcinoma, compared to TTF-1 (2). Studies have shown that Napsin A, used in combination with TTF-1, provided 91% sensitivity and 100% specificity for lung adenocarcinoma, if CK5 and Desmoglein 3 were both negative (2).

Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, an enzyme labeled polymer is added to bind to the primary antibody. The detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Rabbit polyclonal

Species Reactivity: Human; others not tested

Clone: N/A

Isotype: N/A

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

Epitope/Antigen: Napsin A

Cellular Localization: Cytoplasmic (granular)

Positive Tissue Control: Lung adenocarcinoma

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative

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: Perform heat retrieval using Biocare's Diva Decloaker. Refer to the Diva Decloaker product data sheet for specific instructions.

Protein Block: Incubate for 10 minutes at RT with Biocare's Background Punisher.

Primary Antibody: Incubate for 15 minutes at RT.

Probe: N/A

Polymer: Incubate for 30 minutes at RT with a secondary-conjugated polymer.

Protocol Recommendations Cont'd:

Chromogen:

Incubate for 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:

1. This antibody has been standardized with Biocare's MACH 2 DS 2 detection system.
2. Use TBS buffer for washing steps.
3. If this reagent is used in combination with other primary antibodies, the antibody incubation time may need to be extended up to 30 minutes, depending upon the particular protocol of the individual investigator.

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 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:

Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

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 (NaN_3) 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 into 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 MSDS is available upon request and is located at http://biocare.net/support/msds/.

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.

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References:

1. Bishop JA, Sharma R, Illei PB. Napsin A and thyroid transcription factor-1 expression in carcinomas of the lung, breast, pancreas, colon, kidney, thyroid, and malignant mesothelioma. Hum Pathol. 2010 Jan; 41(1):20-5.

2. Tacha D, *et al.* A 6-antibody panel for the classification of lung adenocarcinoma versus squamous cell carcinoma. Appl Immunohistochem Mol Morphol. 2012 May;20 (3):201-7.

3. Tacha D, Yu C, Haas T. TTF-1, Napsin A, p63, TRIM29, Desmoglein-3 and CK5: An Evaluation of Sensitivity and Specificity and Correlation of Tumor Grade for Lung Adenocarcinoma versus Squamous Cell Carcinoma. Mod Pathol. 2011 Feb; 24 (Supplement 1s):425A.

4. Tacha D, Zhou D, Henshall-Powell RL. Distinguishing Adenocarcinoma from Squamous Cell Carcinoma in the Lung Using Multiplex IHC Stains: p63 + CK5 and TTF-1 + Napsin A. Mod Pathol. 2010 Feb; 23(Supplement 1s):414A.

5. Brown AF, *et al.* Tissue-Preserving Antibody Cocktails to Differentiate Primary Squamous Cell Carcinoma, Adenocarcinoma, and Small Cell Carcinoma of Lung. Arch Pathol Lab Med. 2013 Jan 4. [Epub ahead of print]

6. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."

7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved guideline-Third Edition CLSI document M29-A3 Wayne, PA 2005.

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