p40 (P)

Concentrated and Prediluted Polyclonal Antibody
902-3030-091117

BIOCARE MEDICAL

Catalog Number:	**ACR 3030 A, B**	**APR 3030 AA**
Description:	0.1, 0.5 ml, concentrated	6.0 ml, prediluted
Dilution:	1:100	Ready-to-use
Diluent:	Renaissance Background Reducing	N/A

Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:
p40 recognizes the shortest variant of human p53, and may be a valuable marker in cases where p63 has traditionally been used. At present, p63 is the most frequently used marker for lung squamous cell carcinoma (SqCC). Studies have shown that p63 is extremely sensitive for SqCC; however, it suffers from specificity limitations due to its reactivity in a subset of lung adenocarcinomas. Diagnosing non-small cell lung cancer (NSCLC) by morphology in small samples (e.g. biopsy, cellblock, FNA) can be difficult. Given that conserving tissue for molecular testing is a priority, a minimalist immunohistochemistry (IHC)-based diagnostic approach is warranted.
In a study, p40 staining was equivalent to p63 in sensitivity for SqCC, but exhibited markedly superior specificity vs. p63, which eliminated a potential pitfall of misinterpreting a p63-positive adenocarcinoma as squamous cell carcinoma (1). This report strongly supports the routine use of p40 as an alternative for p63 for the diagnosis of pulmonary squamous cell carcinoma. p40 may prove to be an important antibody in the differential diagnosis of lung adenocarcinoma vs. lung SqCC.

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

Immunogen: a synthetic peptide corresponding to amino acids 5-17 of human p40

Clone: N/A

Isotype: IgG

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

Epitope/Antigen: amino acids 5-17 of p40 (ΔNp63)

Cellular Localization: Nuclear

Positive Control: Lung SqCC

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.

Staining 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 30 minutes at RT.

Probe: N/A

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

Chromogen: Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 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 4 detection system. Use TBS buffer for washing steps.
2. Lot to lot staining variability may occur with polyclonal antibodies.
3. Light cytoplasmic staining of smooth muscle and blood vessels may be observed, which should be considered negative for p40 expression.

Limitations:
This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

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) (3)
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. (4)
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.

Technical Support:
Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:

1. Bishop JA, *et al*. p40 (ΔNp63) is superior to p63 for the diagnosis of pulmonary squamous carcinoma. Mod Pathol. 2012 Mar; 25(3):405-15.
2. Pelosi G, *et al*. ΔNp63 (p40) and thyroid transcription factor-1 immunoreactivity on small biopsies or cell blocks for typing non-small cell lung cancers: a novel two-hit, sparing-material approach. J Thorac Oncol. 2012 Feb; 7(2):281-90.
3. 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."
4. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.

Biocare Medical
60 Berry Drive
Pacheco, CA 94553
USA

Tel: 800-799-9499 | www.biocare.net | Fax: 925-603-8080