

# Carcinoembryonic Antigen (CEA {P})

Concentrated and Prediluted Polyclonal Antibody  
902-009-022818

**BIOCARE**  
M E D I C A L

<b>Catalog Number:</b>	<b>ACR 009 A, B, C</b>	<b>APR 009 AA</b>
<b>Description:</b>	0.1, 0.5, 1.0 ml, concentrated	6.0 ml, prediluted
<b>Dilution:</b>	1:100	Ready-to-use
<b>Diluent:</b>	Da Vinci Green	N/A

## Intended Use:

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

## Summary and Explanation:

According to studies, carcinoembryonic antigen reacts with CEA and CEA-like proteins such as NCA (non-specific cross-reacting antigen) and NCA2 and biliary glycoprotein (BGP1). In all tissues, the NCA of neutrophil granulocytes are stained positive. In colon adenocarcinoma, the antibody labels the cytoplasm of the tumor cells strongly. In the normal colon, the luminal part of enterocytes is strongly labeled. In breast carcinoma, a low percentage of glandular epithelial cells are stained. Gland lumina and some epithelial cell membranes in the normal breast tissue show positive staining. In the liver, the biliary canaliculi are positive. In general, CEA will mark adenocarcinoma of the stomach, colon, lung and pancreas; CEA is weakly or occasionally positive (less than 10%) for prostate cancer, bladder cancer and hepatoma. CEA is negative for squamous cell carcinoma of the skin and esophagus, mesothelioma, lymphoma, melanoma and sarcoma.

## 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. This 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. Lot specific Ig concentration is not available.

**Epitope/Antigen:** CEA

**Cellular Localization:** Cytoplasmic

**Positive Tissue Control:** Colon carcinoma

**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.

## Staining Protocol Recommendations:

**Peroxide Block:** Block for 5 minutes with Biocare's Peroxidized 1.

**Pretreatment:** N/A

**Protein Block (Optional):** Incubate for 5-10 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:

This antibody has been standardized with Biocare's MACH 4 detection system. Use TBS buffer for washing steps.

## 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<sub>3</sub>) 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 into 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>.

## Technical Support:

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

## References:

1. Sheahan K, *et al.* Differential reactivities of carcinoembryonic antigen (CEA) and CEA-related monoclonal and polyclonal antibodies in common epithelial malignancies. *Am J Clin Pathol.* 1990;94:157-64.
2. Nap M, Hoor KAT, Fleuren GJ. Cross-reactivity with normal antigens in commercial anti-CEA sera, used for immunohistology. The need for tissue controls and absorptions. *Am J Clin Pathol.* 1983;79:25-31.
3. Nap M, *et al.* CEA and NCA in benign and malignant breast tumors. *Am J. Clin Pathol.* 1984;82:526-34.
4. Taylor & Cote. Immunomicroscopy: A Diagnostic Tool for the Surgical Pathologist.
5. 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."
6. 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.



60 Berry Drive  
Pacheco, CA 94553  
USA

Rev: 062117

Tel: 800-799-9499 | [www.biocare.net](http://www.biocare.net) | Fax: 925-603-8080