# Cytokeratin 7 (CK7)

Concentrated and Prediluted Monoclonal Antibody
902-061-083022

BIOCARE MEDICAL

| Available Product Formats | | | | |
|---|---|---|---|---|
| Format | Catalog Number | Description | Dilution | Diluent |
| Concentrate | ACR 061 A, B, C | 0.1, 0.5, 1.0 mL | 1:100 | Da Vinci Green |
| Predilute | APR 061 AA | 6.0 mL | Ready-to-use | N/A |
| Q Series– For Leica BOND-III | ALR 061 G7 | 7.0 mL | Ready-to-use | N/A |

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

**Summary and Explanation:**
Cytokeratin 7 is an intermediate filament protein (IFP) of 54 kDa that recognizes the simple epithelium found in most glandular and transitional epithelia; but not that which is found in stratified squamous epithelia. This monoclonal antibody [OV-TL 12/30] is highly specific to cytokeratin 7 and shows no cross-reaction with other IFPs. Cytokeratin 7 is a basic cytokeratin, and is expressed in epithelial cells of ovary, lung, and breast, but not of colon or gastrointestinal tract. It is often used in conjunction with cytokeratin 20 in distinguishing ovarian, pulmonary, and breast carcinomas (CK7+) from colon carcinomas (CK7-).

**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, a one-step or two-step detection procedure can be applied. A one-step procedure will feature an enzyme labeled polymer that binds the primary antibody. A two-step procedure will feature a linker antibody added to bind to the primary antibody. An enzyme-labeled polymer is then added to bind the linker antibody. These detections of the bound antibodies are evidenced by a colorimetric reaction.

**Source:** Mouse monoclonal
**Species Reactivity:** Human; others not tested
**Clone:** OV-TL 12/30
**Isotype:** IgG1
**Protein Concentration:** Call for lot specific Ig concentration.
**Epitope/Antigen:** CK7
**Cellular Localization:** Cytoplasmic
**Positive Tissue Control:** Ovarian or breast cancer

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

**Supplied As:** Buffer with protein carrier and preservative

**Storage and Stability:**
Store at 2ºC to 8ºC. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC.

**Staining Protocol Recommendations (intelliPATH FLX® and manual use):**
**Peroxide Block:** Block for 5 minutes with Peroxidazed 1.
**Pretreatment Solution (recommended):** Diva or Reveal, or Pepsin digestion
**Pretreatment Protocol:**
Heat Retrieval Method:
Perform heat retrieval using Diva or Reveal Decloaker. Refer to the Diva or Reveal Decloaker product data sheet for specific instructions.
Digestion Method:
Digest with Pepsin enzyme for 5 minutes at 37°C –or- for 15 minutes at RT.
**Protein Block (Optional):** Incubate for 5-10 minutes at RT with Background Punisher.
**Primary Antibody:** Incubate for 30 minutes at RT.
**Probe:** Incubate for 10 minutes at RT with a secondary probe.
**Polymer:** Incubate for 10-20 minutes at RT with a tertiary polymer.
**Chromogen:** Incubate for 5 minutes at RT with Biocare's DAB -OR- Incubate for 5-7 minutes at RT with Warp Red.
**Counterstain:**
Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

**Staining Protocol Recommendations (intelliPATH FLX and manual use) Cont'd:**
**Technical Note:**
This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

**Staining Protocol Recommendations (Q Series – For Leica BOND-III):**
ALR061 is intended for use with the Leica BOND-III. Refer to the User Manual for specific instructions for use. Recommended protocol parameters are as follows:
**Protocol Name:** IHC Protocol F
**Detection:** Bond Polymer Refine
**HIER:** 10 min with ER1
**Peroxide Block:** 5 min
**Marker (Primary Antibody):** 15 min
**Post Primary:** 8 min
**Polymer:** 8 min
**Mixed DAB Refine:** 10 min
**Hematoxylin:** 5 min

**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) (7)
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. (8)
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. Lagendijk JH, *et al.* Tracing the origin of adenocarcinomas with unknown primary using immunohistochemistry: differential diagnosis between colonic and ovarian carcinomas as primary sites. Hum Pathol. 1998 May;29(5):491-7.
2. Tan J, *et al.* Villin, cytokeratin 7, and cytokeratin 20 expression in pulmonary adenocarcinoma with ultrastructural evidence of microvilli with rootlets. Hum Pathol. 1998 Apr;29(4):390-6.
3. Bouwens L. Cytokeratins and cell differentiation in the pancreas. J Pathol. 1998 Mar;184(3):234-9.

Biocare Medical
60 Berry Drive
Pacheco, CA 94553
USA



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

**References Cont'd:**
4. Loy TS, Calaluce RD, Keeney GL. Cytokeratin immunostaining in differentiating primary ovarian carcinoma from metastatic colonic adenocarcinoma. Mod Pathol. 1996 Nov;9(11):1040-4.
5. Wauters CC, *et al.* Keratins 7 and 20 as diagnostic markers of carcinomas metastatic to the ovary. Hum Pathol. 1995 Aug;26(8):852-5.
6. Loy TS, Calaluce RD. Utility of cytokeratin immunostaining in separating pulmonary adenocarcinomas from colonic adenocarcinomas. Am J Clin Pathol. 1994 Dec;102(6):764-7.
7. 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."
8. 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