GENE BIO SOLUTION

CYTOKERATIN 7 (CK7)

Format	Catalog no.	Pack size	Dilution
Concentrated	GB 061 A, B, C	0.1, 0.5, 1.0 mL	1:100
Prediluted	GB 061 AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

The 54 kDa CK7 antibody is an IFP that identifies the simple epithelium in most transitional and glandular epithelia, but not in stratified squamous epithelia. It has been demonstrated that this monoclonal antibody [OV-TL 12/30] is extremely specific to Cytokeratin 7 and does not react with any other IFPs. The epithelial cells of the ovaries, the lungs, and the breasts exhibit the basic cytokeratin 7, whereas the cells of the colon and the gastrointestinal tract do not. When combined with Cytokeratin 20 and CDX-2, it helps differentiate CK7+ ovarian, lung, and breast carcinomas from CK7- colon carcinomas.

INTENDED USE -

The cytokeratin 7 (CK7) antibody, which is a mouse monoclonal antibody, is designed for in vitro diagnostic usage in human tissues preserved with formalin-fixed paraffin-embedded (FFPE). Its purpose is to qualitatively identify the cytokeratin 7 (CK7) protein using immunohistochemistry (IHC). Morphological examinations with appropriate controls should supplement the clinical interpretation of staining or lack thereof. A competent pathologist should assess these findings in light of the patient's medical history and other diagnostic procedures.

SUMMARY AND EXPLANATION -

The 54 kDa intermediate filament protein (IFP) cytokeratin 7 can distinguish between the simple epithelium of glandular and transitional epithelia and the stratified squamous epithelium. There is no evidence of cross-reactivity between cytokeratin 7 and any of the other IFPs when using this monoclonal antibody [OV-TL 12/30]. The epithelial cells of the ovaries, the lungs, and the breasts exhibit the basic cytokeratin 7, whereas the cells of the colon and the gastrointestinal tract do not. Combining it with cytokeratin 20 helps differentiate CK7+ ovarian, lung, and breast cancers from CK7- colon carcinomas.

PRINCIPLE OF PROCEDURE -

Immunohistochemistry is a multi-step method that can be used to detect antigens in cells and tissues. The primary antibody is bound to its specific epitope in the initial stage. A one-, two-, or three-step detection approach can be used after the antigen has been labeled with a primary antibody. An enzyme-labeled polymer will attach to the main antibody in the one-step method. The addition of a secondary antibody to bind to the first antibody is the second stage of a two-phase process. The next step is to attach the secondary antibody with an enzyme-labeled polymer. A secondary antibody will be added to the three-step detection technique to attach to the main antibody, and then a linker antibody will be used for maximal binding. To bind to the linker antibody, an enzyme-labeled polymer is subsequently added. As proof of these antibody binding detections, a colorimetric reaction is observed.

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 LOCALISATION - Cytoplasmic

POSITIVE TISSUE CONTROL - Ovarian or breast cancer

KNOWN APPLICATIONS -Immunohistochemistry
30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

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.

Materials required but not provided -

1) Positivetissuecontrol-Ovarianorbreastcancer

2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10)Detection system
11)Chromogen
12)Wash buffer
13) Hematoxylin
14)Antibody diluents
15)Peroxide block
16)Light microscope
17)Mounting medium

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 Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.