GENE BIO SOLUTION

Cytokeratin 18 (CK 18)

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3061A,C	0.1, 1.0 mL	1:100
Prediluted	GB3061AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

The Cytokeratin 18 antibody (CK18) [DC10] is a 45 kDa acidic intermediate filament protein. It is typically co-expressed with Cytokeratin 8 and is present in the majority of simple ductal and glandular epithelia. Research indicates that this antibody interacts with numerous simple epithelia, including those of the gastrointestinal tract, lung, breast, pancreatic, ovary, and thyroid cancers, whereas it does not respond with tumor cells of non-epithelial origin, such as glioma, melanoma, and osteosarcoma. It also does not interact with stratified squamous epithelium in most cases of squamous cell cancer.

INTENDED USE -

Cytokeratin 18 (CK18) [DC10] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of cytokeratin 18 protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical assessment of any staining or its absence must be supplemented by morphological analyses with appropriate controls and should be considered in conjunction with the patient's clinical history and other diagnostic evaluations by a certified pathologist.

SUMMARY AND EXPLANATION -

Cytokeratin 18 (CK18) is a 45 kDa acidic intermediate filament protein. It is typically coexpressed with cytokeratin 8 and is present in the majority of simple ductal and glandular epithelia. The antibody interacts with a diverse range of neoplastic tissues, including those of the gastrointestinal tract, lung, and breast cancers; however, it does not respond with tumor cells of nonepithelial origin, such as glioma, melanoma, and osteosarcoma. It also does not interact with stratified squamous epithelium in the majority of squamous cell carcinoma cases. Research has indicated that a decrease in CK18 may serve as a prognostic indicator in specific malignancies.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells involves a multi-step immunohistochemistry process. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, a one-, two-, or three-step detection protocol may be utilized. The one-step approach will utilize an enzyme-conjugated polymer that attaches to the main antibody. A two-step protocol will involve the addition of a secondary antibody to bind to the original antibody. An enzyme-conjugated polymer is subsequently introduced to bind to the secondary antibody. The three-step detection protocol will incorporate a secondary antibody to bind to the primary antibody, succeeded by a linker antibody step to enhance binding efficacy. An enzyme-conjugated polymer is subsequently introduced to attach to the linkerantibody.Thepresenceofboundantibodiesisdemonstratedbyacolorimetric response.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - DC10

ISOTYPE - IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Cytokeratin 18

CELLULAR LOCALISATION - Cytoplasmic

POSITIVE TISSUE CONTROL - Colon and skin

KNOWN APPLICATIONS - I mmunohistochemistry
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 95ºC followed by cooling at room temperature for 20 minutes.

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.

Materials required but not provided -

1) Positivetissuecontrol-Colonandskin
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.