

UROPLAKIN II Concentrated Monoclonal Antibody

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3051A,C	0.1, 1.0 mL	1 : 100
Prediluted	GB3051AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Uroplakin II is a 15 kDa protein constituent of urothelial plaques. Research indicates that Uroplakin II mRNA has great specificity and is expressed in both bladder cancer tissues and the peripheral blood of individuals with primary and metastatic urothelial carcinoma of the bladder. The Uroplakin II antibody [BC21] demonstrated enhanced sensitivity (46/59, 78%) relative to Uroplakin III [AU1] (191/56, 34%) in instances of urothelial carcinoma of the bladder, excluding the bladder and ureter; staining exhibited high specificity across diverse normal and neoplastic tissues in an internal study. Uroplakin II antibody [BC21] is a highly specific antibody potentially valuable for the identification of malignancies originating from urothelium.

INTENDED USE -

Uroplakin II [BC21] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of uroplakin II protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

Uroplakin II is a 15 kDa protein constituent of urothelial plaques that augment the permeability barrier of the urothelium. Research indicates that Uroplakin II mRNA is present in bladder cancer tissues and the peripheral blood of individuals with both primary and metastatic urothelial carcinoma of the bladder. A novel mouse monoclonal Uroplakin II antibody [BC21] was created, demonstrating enhanced staining sensitivity (46/59, 78%) relative to Uroplakin III [AU1] (19/56, 34%) in instances of urothelial cancer of the bladder. Uroplakin II [BC21] demonstrated great specificity in many normal and neoplastic tissues, including prostate cancer and renal cell carcinoma, with the exception of the bladder and ureter. Uroplakin II [BC21] is a highly specific antibody potentially valuable for the identification of malignancies originating from urothelium.

PRINCIPLE OF PROCEDURE -

The principle of procedure involves a multi-step immunohistochemistry method for antigen detection in tissues and cells. 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 single-step process will incorporate an enzyme-conjugated polymer that attaches to the main antibody. A two-step approach will involve the addition of a secondary antibody to bind to the primary antibody. An enzyme-conjugated polymer is subsequently introduced to engage with the secondary antibody. The three-step detection protocol will include the addition of a secondary antibody to bind to the main antibody, succeeded by a linker antibody step to enhance binding efficacy. An enzyme-conjugated polymer is subsequently introduced to attach to the linker antibody. The presence of bound antibodies is demonstrated by a colorimetric response.

SOURCE - Monoclonal mouse

SPECIES REACTIVITY - Human; others not tested

CLONE - BC21

ISOTYPE - IgG1/kappa

PROTEIN CONCENTRATION - Request lot-specific immunoglobulin concentration.

EPITOPE/ANTIGEN - : Residues 36-50 of human Uroplakin II

CELLULAR LOCALISATION - Cytoplasmic and membrane

POSITIVE TISSUE CONTROL - Normal bladder or urothelial carcinoma of the bladder

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 a protein carrier and preservative

STORAGE AND STABILITY -

Store at 2°C to 8°C. 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 2°C to 8°C.

Materials required but not provided -

- 1) Positive tissue control - Normal bladder or urothelial carcinoma of the bladder
- 2) Negative control tissue (internal or external)
- 3) Microscope slides and coverslips
- 4) Staining jars or baths
- 5) Timer
- 6) Xylene or xylene substitute
- 7) Ethanol or reagent alcohol
- 8) Deionized or distilled water
- 9) Heating equipment or enzyme for tissue pretreatment step
- 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.