

UROPLAKIN III

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3023A,C	0.1, 1.0 mL	1:100
Prediluted	GB3023AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Uroplakin III is located on the urothelial surface membrane of the human renal pelvis, ureter, bladder, and urethra. Uroplakin III [BC17] exhibited greater sensitivity than [AU1] in urothelial transitional cell carcinomas during in-house tests. [BC17] staining was negative in all normal and neoplastic tissues, with the exception of the bladder; hence, it is highly selective to uroepithelial tumors and may serve as a valuable tool for differentiating between bladder, renal, and prostate malignancies. The absence of Uroplakin III expression in bladder tumors correlates with increased grade, muscle-invasive characteristics, and lymphovascular invasion. Uroplakin III [BC17] can be utilized in an antibody panel comprising GATA3, p63, and S100P.

INTENDED USE -

Uroplakin III [BC17] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of uroplakin III 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 III is a 47 kDa glycoprotein located in the urothelial surface membrane of the human renal pelvis, ureter, bladder, and urethra. Uroplakin III clone BC17 is a recently generated clone that has exhibited superior sensitivity (33/59, 56%) in comparison to clone AU1 (19/58, 32%) for urothelial transitional cell carcinomas, according to in-house research. Aside from the bladder, BC17 staining was negative in all normal and neoplastic tissues, including breast, lung, colon, prostate, kidney, ovarian, liver, and pancreatic cancers; thus, clone BC17 is highly specific to uroepithelial tumors and may aid in distinguishing bladder, renal, and prostate cancers. In contrast, diminished expression of uroplakin III in bladder tumors correlates with increased grade, muscle-invasive malignancy, and lymphovascular invasion. The novel Uroplakin III mouse monoclonal is significantly more effective

than clone AU1 and can be incorporated into a panel of antibodies that includes GATA3, p63, and S100P.

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 linker antibody. The presence of bound antibodies is demonstrated by a colorimetric response.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE- BC17

ISOTYPE - : IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Uroplakin III

CELLULAR LOCALISATION - Membrane and cytoplasmic

POSITIVE TISSUE CONTROL - Bladder 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. 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-Bladder cancer
- 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.