

Desmoglein 3 + CK5

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3018A,C	0.1, 1.0 mL	1:100
Prediluted	GB3018AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Desmoglin 3 (DSG3) is frequently overexpressed in multiple squamous cell carcinomas (SqCC). In investigations of lung squamous cell carcinoma, DSG3 has exhibited a sensitivity of 85-99% and a specificity of 98-100% in distinguishing lung adenocarcinoma. Multiple studies have demonstrated CK5/6 as a sensitive marker for lung squamous cell carcinoma (SqCC). Two studies utilizing a combination of DSG3 and CK5 antibodies demonstrated sensitivities of 93% and 100% for lung squamous cell carcinoma, with a specificity of 100% against lung adenocarcinoma. Research indicates that a DSG3 and CK5 combination offers enhanced sensitivity and specificity relative to other markers for lung squamous cell carcinoma (SqCC).

INTENDED USE -

Desmoglein 3 + CK5 [BC11 + XM26] is a mouse monoclonal antibody cocktail designed for laboratory application in the qualitative detection of desmoglein 3 and CK5 proteins 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 -

Desmoglein 3 (DSG3) is a calcium-binding transmembrane glycoprotein that constitutes a component of desmosomes in vertebrate epithelial cells. At present, three members of the desmoglein subfamily have been found, all of which belong to the cadherin cell adhesion molecule superfamily. Desmogleins display membrane expression and associate with cytokeratins via desmoplakins and plakoglobin. DSG3 plays a crucial role in the cellular adhesion of squamous epithelium and is thus frequently overexpressed in various squamous cell carcinomas (SqCC). In lung squamous cell carcinoma, DSG3 exhibits a sensitivity of 85-99% and a specificity of 98-100% in distinguishing lung adenocarcinoma. CK5 is a type II intermediate filament protein expressed in the active basal layers of most stratified squamous epithelia. Multiple studies have demonstrated CK5/6 as a sensitive biomarker for lung squamous cell carcinoma (SqCC). In one study, CK6

mRNA was detected in 28% of lung adenocarcinoma (ADC) cases, indicating that CK5 may serve as a more specific marker. An internal investigation revealed that rabbit monoclonal CK5 had comparable sensitivity to mouse monoclonal CK5/6 for lung squamous cell carcinoma (SqCC). Rabbit monoclonal CK5 exhibits 87% sensitivity for lung squamous cell carcinoma (SqCC) and 100% specificity against lung adenocarcinoma (ADC), according to published investigations. Two investigations utilizing a combination of DSG3 and CK5 have demonstrated sensitivities of 93% and 100% for lung squamous cell carcinoma, with a specificity of 100% against lung adenocarcinoma as established in both studies. DSG3 and CK5, especially when utilized in conjunction, may serve as the optimal markers for lung SqCC, exhibiting enhanced sensitivity and specificity relative to other markers.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-phase immunohistochemical procedure. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, a secondary antibody is introduced to attach to the primary antibody. An enzyme label is subsequently introduced to bind with the secondary antibody; the detection of the bound antibody is demonstrated using a colorimetric reaction.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human

CLONE- BC11+XM26

ISOTYPE - : IgG1 + IgG1/kappa

PROTEIN CONCENTRATION--~10mg/ml.Call for lots specific Ig concentration.

EPITOPE/ANTIGEN - Desmoglein 3 and CK5

CELLULAR LOCALISATION-Desmoglein3:membrane;CK5:cytoplasmic

POSITIVE TISSUE CONTROL - Lung squamous cell carcinoma

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 - Lung squamous cell carcinoma
- 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.