Desmoglein 3

Concentrated and Prediluted Monoclonal Antibody
902-419-090619

BIOCARE MEDICAL

Catalog Number:	**ACR 419 A, C**	**APR 419 AA**
Description:	0.1, 1.0 ml, conc.	6.0 ml, RTU
Dilution:	1:100	Ready-to-use
Diluent:	Renoir Red	N/A

Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:
Desmoglein 3 (DSG3) is a type of desmosomal cadherin, thought to mediate calcium dependent cell-cell adhesion as part of a larger structure found in epithelia and cardiac muscle called a desmosome (1). Studies have shown DSG3 to be overexpressed in head and neck and sinonasal squamous cell carcinoma (SqCC), and overexpression was correlated with malignancy (2,3). Lung immunohistochemistry studies with DSG3 have shown a sensitivity and specificity of 98% and 99%, respectively, in detecting lung SqCC versus lung adenocarcinoma (LADC). With the advent of type-specific therapies, and associated toxicities, it is critical to differentiate non–small cell lung carcinomas (NSCLCs) by histologic type: LADC or lung SqCC (5). Additional studies have shown that DSG3 expression indicates a poor prognosis in lung cancers with a more aggressive clinical outcome (6). DSG3 may be a useful diagnostic marker to distinguish SQCC from other subtypes of lung cancers.

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human; others not tested
Clone: BC11
Isotype: IgG1
Protein Concentration: Call for lot specific Ig concentration.
Epitope/Antigen: Desmoglein 3
Cellular Localization: Cell membrane
Positive Tissue Control: Lung squamous cell carcinoma

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

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.

Staining Protocol Recommendations (intelliPATH FLX® and manual use):

Peroxide Block: Block for 5 minutes with Peroxidazed 1.
Pretreatment: Perform heat retrieval using Diva Decloaker (preferred) or Reveal Decloaker. Refer to the Diva or Reveal Decloaker data sheet for specific instructions.
Block (Optional): Incubate for 5-10 minutes at RT with Background Punisher.
Primary Antibody: Incubate for 30 minutes at RT.
Probe: Incubate for 10 minutes at RT with a MACH 4 Probe.
Polymer: Incubate for 10-20 minutes at RT with a MACH 4 Polymer.
Chromogen: Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 minutes at RT with Warp Red.

Staining Protocol Recommendations (intelliPATH FLX and manual use) Cont'd:

Counterstain:
Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

Technical Notes:
1. This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.
2. If used with PulmoPanel™ it is strongly recommended that Diva + MACH 4 detection be used.

Limitations:
This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

Precautions:
1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN_3) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (7)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (8)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at http://biocare.net.

Technical Support:
Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:

1. Chidgey M, Dawson C. Desmosomes: a role in cancer? Br J Cancer. 2007 Jun 18;96(12):1783-7.
2. Wong MP, *et al.* Loss of desmoglein 1 expression associated with worse prognosis in head and neck squamous cell carcinoma patients. Pathology. 2008 Oct; 40(6):611-6.
3. Huang CC, *et al.* Desmoglein 3 is overexpressed in inverted papilloma and squamous cell carcinoma of sinonasal cavity. Laryngoscope. 2010 Jan; 120(1):26-9.
4. Savci-Heijink CD, *et al.* The role of desmoglein-3 in the diagnosis of squamous cell carcinoma of the lung. Am J Pathol. 2009 May; 174(5):1629-37.
5. Gressett SM, Shah SR. Intricacies of bevacizumab-induced toxicities and their management. Ann Pharmacother. 2009 Mar;43(3):490-501.

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References Cont'd:
6. Fukuoka J, *et al.* Desmoglein 3 as a prognostic factor in lung cancer. Hum Pathol. 2007 Feb;38(2):276-83.
7. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
8. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.

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