

## Anti-Desmoglein-3 [DSG3/2839]

| Catalog No. | Description   |
|-------------|---|
| AMA77-5M    | 6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system                                   |
| AMA77-10M   | 10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive™ Detection Systems and i6000™ Automated Staining Systems |
| MUA77-UC    | 1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system                                   |
| MUA77-5UC   | 0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system                                 |
| AXA77-YCD   | Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite/Ultra Staining System, 160 tests   |
| AXA77-50D   | Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite/Ultra Staining System, 50 tests  |

| Clone     | Species | Ig Class |
|-----------|---------|----------|
| DSG3/2839 | Mouse   | IgG1     |

### Intended Use

**For In Vitro Diagnostic Use.** This antibody is designed for the specific localization of Desmoglein-3 in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

### Summary and Explanation

Desmoglein 3 (Dsg3), also known as Cadherin family member 6 (CDHF6), is a member of the desmosomal cadherin family and plays a critical role in cell-cell adhesion. It is a calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. DSGs/ desmocollin (DSCs) are anchored to the intracellular plaque proteins plakoglobin, plakophilins, and desmoplakin, the latter of which mediates connection to the intermediate filament cytoskeleton. Desmoglein 3 is predominately expressed in stratified squamous epithelia including epidermis, tongue, tonsil, esophagus and carcinomas. This protein has been identified as the autoantigen of the autoimmune skin blistering disease pemphigus vulgaris wherein the binding of anti-desmoglein 3 autoantibodies causes the loss of cell-cell adhesion, which clinically manifests as blisters on the skin and oral mucosa, and histologically as suprabasilar acantholysis. The Desmoglein 3 antibody has been cited as a superior marker for Lung Squamous Cell Carcinomas, and helps distinguish lung squamous cell carcinoma cases from lung adenocarcinomas. Studies have also shown that a panel

consisting of Desmoglein-3 utilized with Napsin A can be a useful immunohistochemical marker for differentiation of lung squamous cell carcinoma and adenocarcinomas from other subtypes. Lung cases that are typically positive for Desmoglein 3 tend to have a poor clinical outcome.

### Storage and Handling

**Store at 2-8°C.** Fresh dilutions, if required, should be prepared prior to use and are stable and steady for up to one day at room temperature (20-26°C). Diluted antibody preparations can be refrigerated or frozen for extended shelf life.

### Principles of the Procedure

Antigen detection by immunohistochemistry (IHC) is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The [primary antibody](#) may be used in IHC using manual techniques or BioGenex Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

### Reagents Provided

Mouse Monoclonal Antibody Desmoglein-3 is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide.

### Dilution of Primary Antibody

BioGenex Ready-to-Use antibodies have been optimized for use with the recommended BioGenex Detection System and should not require further dilution.

BioGenex concentrated antibodies must be diluted in accordance with the recommended protocol when used with the recommended BioGenex Detection System.

### Recommended Protocol

Refer to the following table for conditions specifically recommended for this antibody. Refer to the BioGenex website for guidance on specific staining protocols or other requirements.

| Parameter                                      | BioGenex Recommendations                                   |
|--|--|
| Control Tissue                                 | Lung tissue as available with Biogenex FB-A77M* & FG-A77M* |
| Recommended Dilution for Concentrated Antibody | <b>1:50-100 in HK941</b>                                   |
| Recommended Pretreatment (Manual/i6000)**      | EZ-AR2 (HK522-XAK)   |
| Recommended Pretreatment (Xmatrx)              | EZ-AR2 Elegance (HX032-YCD)                                |
| Antibody Incubation                            | 30-60 Min at RT  |

|              |             |              |              |
|--------------|-------------|--------------|--------------|
| Category     | Antibodies  | Revision No. | B            |
| Document No. | 932-A77M-EN | Release Date | 01-June-2021 |

|  |   |
|--|---|
| (Manual/i6000)   |   |
| Antibody Incubation (Xmatrx)                           | 30-60 Min at RT   |
| Detection System for Manual, Xmatrx & i6000 systems*** | Use BioGenex Two-Step <b>OR</b> One-Step Super Sensitive™ Polymer-HRP IHC Detection System/DAB; see p. 2 for more information |

\*FB: positive control barrier slides, FG: positive control non-barrier slides. Xmatrx requires barrier slides.

\*\*Pretreatment times will vary based on individual microwave power.

\*\*\*For automation systems (Xmatrx-Elite, Xmatrx-Ultra & i6000 Diagnostics), refer to the factory protocols provided with the instrument.

| Detection System   | Two-Step HRP Kit       | One-Step HRP Kit       | Link and Label Kit     |
|--|------------------------|------------------------|------------------------|
| Manual   | QD440-XAKE (1000 Test) | QD630-XAKE (1000 Test) | QP300-XAKE (1000 Test) |
|  | QD430-XAKE (1000 Test) |                        |                        |
|  | QD420-YIKE (500 Test)  | QD620-XAKE (500 Test)  | QP900-9LE (500 Test)   |
|  | QD400-60KE (60 Test)   |                        |                        |
| Xmatrx - Automation  | QD550-YCDE (200 Test)  | QD610-YADE (200 Test)  | N/A                    |
| i6000 - Automation   | QD410-YAXE (200 Test)  | QD610-YAXE (200 Test)  | N/A                    |
| For more information, visit <a href="http://www.biogenex.com">www.biogenex.com</a> . |                        |                        |                        |

### Precautions

This product contains sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at the product concentrations, but proper handling protocols should be observed. For more information, a Safety Data Sheet (SDS) for sodium azide is available upon request. Dispose of unused reagents according to Local, State and Federal Regulations. Wear suitable Personal Protective Equipment, do not pipette reagents by mouth, and avoid contact of reagents and specimens with skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with copious amounts of water.

### Quality Control

Refer to BioGenex detection system documents for guidance on general quality control procedures.

### Troubleshooting

Refer to the troubleshooting section in the documentation for BioGenex Detection Systems (or equivalent detection systems) for remedial actions on detection system related issues, or contact BioGenex Technical Support Department at 1-800-421-4149

or [support@biogenex.com](mailto:support@biogenex.com) or your local distributor to report unusual staining.

### Expected Results

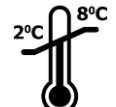







This antibody stains membrane in positive cells in formalin-fixed, paraffin embedded tissue sections. An example image of a tissue section stained with this antibody can be found on the product page on the BioGenex website. Interpretation of the staining result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure.

### Limitations of the Procedure

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results.

### Bibliography

1. Savci-Heijink CD, et al. The role of desmoglein-3 in the diagnosis of squamous cell carcinoma of the lung. *Am J Pathology* 2009; 174(5):1629-37.
2. Huang CC, et al. *Laryngoscope*. 2010 Jan; 120 (1):26-9.
3. Wong MP, et al. *Pathology*. 2008 Oct; 40(6):611-6.
4. Kawasaki Y, et al. *Autoimmunity*. 2006 Nov; 39(7):587-90.
5. Xi L, et al. *Clin Cancer Res*. 2006 Apr 15; 12(8):2484-91.

|   |  |   |                                    |
|---|--|---|------------------------------------|
|  | Temperature Limitation                   |  | In Vitro Diagnostic Medical Device |
|  | Use By Date                              |  | Batch Code                         |
|  | Non-Sterile                              |  | Consult Instructions for Use       |
|  | Representative in the European Community |  | Manufacturer                       |

© 2020, BioGenex Laboratories. All rights reserved.

|              |             |              |              |
|--------------|-------------|--------------|--------------|
| Category     | Antibodies  | Revision No. | B            |
| Document No. | 932-A77M-EN | Release Date | 01-June-2021 |