# **Desmoglein 3**

Clone: BSB-61 Mouse Monoclonal



Inset: IHC of Desmoglein 3 on a FFPE Anal Carcinoma Tissue

# **Intended Use**

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalinfixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

## **Immunogen**

A synthetic peptide corresponding to the N-terminus of human Desmoglein 3 protein.

# **Summary and Explanation**

Desmoglein 3 is a protein that is encoded by the DSG3 gene on Chromosome 18. Desmoglein 3 is a calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. Currently, four desmoglein subfamily members have been identified and all are members of the cadherin cell adhesion molecule superfamily. This protein has been identified as the autoantigen of the autoimmune skin blistering disease pemphigus vulgaris.

Desmoglein 3 has been cited as a superior marker for Lung Squamous Cell Carcinomas, and helps distinguish lung squamous cell carcinoma cases from lung adenocarcinoma. Studies have also shown that a panel consisiting of Desmoglein-3 utilized with Napsin A can be a useful immunohistochemical marker for differentiation of lung squamous cell carcinoma and adenocarcinoma from other subtypes. Lung cases that are typically positive for Desmoglein 3 tend to have a poor clinical outcome.

Antibody Type	Mouse Monoclonal	Clone	BSB-61
Isotype	lgG1/K	<b>Reactivity</b> Paraffin, Frozen	
Localization	Membranous	Control	Tonsil, Skin, Cervix, Cervical Carcinoma, Lung Squamous Cell Carcinoma
	Species Reactivity	Human	

#### **Precautions**

- 1. For professional users only. Results should be interpreted by a qualified medical professional.
- 2. This product contains <0.1% sodium azide (NaN<sub>3</sub>) as a preservative. Ensure proper handling procedures are used with this reagent.
- 3. Always wear personal protective equipment such as laboratory coat, goggles and gloves when handling reagents.
- 4. Dispose of unused solution with copious amount of water.
- 5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
- 6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
- 7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
- 8. For additional safety information refer to Safety Data Sheet for this product.
- 9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

## **Presentation**

Desmoglein 3 is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Catalog No.	Antibody Type	Dilution	Volume/Qty		
BSB 2789	Tinto Prediluted	Ready-to-Use	3.0 mL		
BSB 2790	Tinto Prediluted	Ready-to-Use	7.0 mL		
BSB 2791	Tinto Prediluted	Ready-to-Use	15.0 mL		
BSB 2792	Concentrated	1:25 - 1:100	0.1 mL		
BSB 2793	Concentrated	1:25 - 1:100	0.5 mL		
BSB 2794	Concentrated	1:25 - 1:100	1.0 mL		

## **Control Slides Available**

Catalog No.	Quantity		
BSB 2795	5 slides		

**Storage** Store at 2-8°C (Control Slides: Store at 20-25°C)

# **Stability**

This product is stable up to the expiration date on the product label. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

## Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

Frozen sections and cell preparations: The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

# **Staining Procedure**

- 1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
- 2. Air dry for 2 hours at 58° C.
- 3. Deparaffinize, dehydrate and rehydrate tissues.
- Subject tissues to heat induced epitope retrieval (HIER) using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).
- 5. Any of three heating methods may be used:

## a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place on trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

#### b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

#### c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a steamer, cover and steam for 30-60 minutes.

- 6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
- 7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
- 8. Wash slides with ImmunoDNA washer or DI water.
- 9. Continue IHC staining protocol. Wash slides between each step with ImmunoDNA washer solution.

#### Abbreviated Immunohistochemical Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP 5 min 30-60 min. 15 min. 15 min. 5-10 min. Varies	
Peroxidase/AP Blocker	5 min.	5 min.		
Primary Antibody	30-60 min.	30-60 min.		
1st Step Detection	10 min.	30-45 min.		
2nd Step Detection	10 min.	Not Applicable		
Substrate-Chromogen	5-10 min.	5-10 min.		
Counterstain / Coverslip	Varies	Varies		

## **Product Limitations**

Normal Tissues					
Pos	itive (+)				
Skin	10/10 (100%)				
Tonsilar Epithelium	10/10 (100%)				
Cervical Epithelium	10/10 (100%)				
Negative (-)					
Liver	0/7 (0%)				
Spleen	0/5 (0%)				
Brain	0/5 (0%)				
Abnormal Tissues					
Positive (+)					
Squamous Cell Carcinoma	8/8 (100%)				
HSIL Cervix	10/10 (100%)				
Lung Squamous Cell Carcinoma	2/2 (100%)				
Negative (-)					
Lymphoblastic Lymphoma	0/5 (0%)				
Hodgkin's Lymphoma	0/3 (0%)				

# **Mounting Protocols**

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent based resin such as PermaMounter (BSB 0094-0097), refer to Pl0174 or Pl0097.

#### **Product Limitations**

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.

## References

- 1. Fattal et. al. Immunology. 2014 Nov;143(3):374-80.
- 2. Agackiran Y et al. Appl Immunohistochem Mol Morphol. 2012 Jul;20(4):350-5.
- 3. Huang CC, et al. Laryngoscope. 2010 Jan; 120 (1):26-9.
- 4. Savci-Heijink CD, et al. Am J Pathol. 2009 May; 174(5):1629-37. Epub 2009 Mar 26.
- 5. Wong MP, et al. Pathology. 2008 Oct; 40(6):611-6.
- 6. 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.
- 6. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

# Symbol Key / Légende des symboles/Erläuterung der Symbole

EC RE	Prinsessegracht 20 2514 AP The Hague The Netherlands In Vitro Diagnostic Medical Device	270	Storage Temperature Limites de température Zulässiger Temperaturbereich  Read Instructions for Use	<b>M</b>	Manufacturer Fabricant Hersteller Expiration Date	REF	Catalog Number Référence du catalogue Bestellnummer Lot Number
IVD	Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum	$\prod$ i	Consulter les instructions d'utilisation Gebrauchsanweisung beachten	><	Utiliser jusque Verwendbar bis	LOT	Code du lot Chargenbezeichnung

