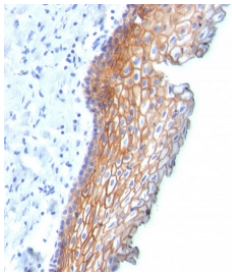
# Desmoglein 3 Antibody / Squamous Epithelial Marker / DSG3 [clone DSG3/2838] (V7932)

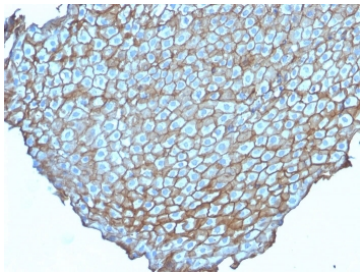
| Catalog No. | Formulation | Size |
|---|---|---|
| V7932-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V7932-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V7932SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

## Bulk quote request

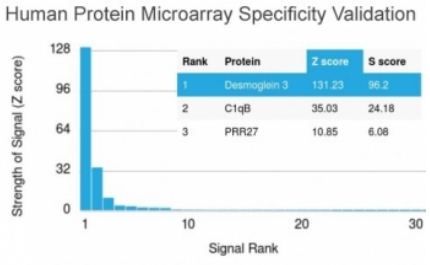
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG1, kappa |
| **Clone Name** | DSG3/2838 |
| **Purity** | Protein G affinity chromatography |
| **UniProt** | P32926 |
| **Localization** | Cell surface |
| **Applications** | Immunohistochemistry (FFPE) : 1-2ug/ml |
| **Limitations** | This Desmoglein 3 Antibody / Squamous Epithelial Marker / DSG3 is available for research use only. |



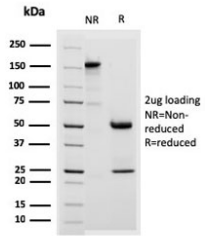
Desmoglein 3 Antibody Esophageal Carcinoma IHC. Immunohistochemistry staining of formalin-fixed, paraffin-embedded human esophageal carcinoma tissue using HuProt validated monoclonal clone DSG3/2838 demonstrates strong membranous HRP-DAB brown staining in malignant squamous epithelial cells, consistent with localization of Desmoglein 3 / DSG3 at desmosomal cell-cell junctions within stratified squamous epithelium-derived tumor tissue. The observed staining pattern supports the established role of DSG3 as a squamous epithelial differentiation and desmosomal adhesion marker. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling prior to staining.



Desmoglein 3 Antibody Squamous Cell Junction IHC. Immunohistochemistry staining of FFPE human esophageal carcinoma tissue using HuProt validated monoclonal clone DSG3/2838 demonstrates strong membranous HRP-DAB brown staining outlining malignant squamous epithelial cells, consistent with localization of Desmoglein 3 / DSG3 at desmosomal junctions within stratified epithelial-derived carcinoma tissue. The staining prominently highlights epithelial cell-cell adhesion architecture characteristic of squamous differentiation-associated tumors. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.




Desmoglein 3 Antibody Protein Microarray Specificity Analysis. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using HuProt validated monoclonal clone DSG3/2838 identified Desmoglein 3 as the dominant target with a Z-score of 131.23 and an S-score of 96.2, supporting exceptionally strong target specificity relative to unrelated proteins present on the array. The markedly elevated S-score demonstrates highly preferential recognition of DSG3 with minimal off-target reactivity. The Z-score represents signal intensity generated by antibody binding relative to the mean signal across the array, while the S-score reflects the difference in signal strength between successive ranked proteins and serves as a measure of relative target specificity.




SDS-PAGE analysis of purified, BSA-free Desmoglein 3 antibody (clone DSG3/2838) as confirmation of integrity and purity.

## Description

Desmoglein 3 (DSG3) is a calcium-dependent cadherin family adhesion protein that functions as a core structural component of desmosomes in stratified squamous epithelia. Desmoglein 3 Antibody / Squamous Epithelial Marker / DSG3 clone DSG3/2838 recognizes a desmosomal junction-associated transmembrane glycoprotein involved in epithelial cell-cell adhesion, tissue integrity, and squamous epithelial organization.

Desmoglein 3 antibody, also referred to as DSG3 antibody and desmosomal adhesion protein antibody in the literature, is widely used in squamous epithelial biology, carcinoma pathology, and epithelial differentiation research applications. Clone DSG3/2838 antibody supports investigation of epithelial junction organization, squamous lineage-associated signaling pathways, and desmosome-associated structural biology in normal and malignant tissues.

DSG3 is primarily localized to desmosomal junctions along the plasma membrane of stratified squamous epithelial cells where it contributes to intercellular adhesion and epithelial mechanical stability. The protein interacts with plakoglobin, plakophilins, desmoplakin, and intermediate filament-associated cytoskeletal networks to maintain epithelial cohesion and barrier architecture. Strong DSG3 expression is characteristic of squamous epithelium including esophageal, oral, cervical, and epidermal epithelial compartments.

In cancer biology and surgical pathology research, DSG3 is strongly associated with squamous differentiation and squamous cell carcinoma-associated epithelial phenotypes. Elevated or retained Desmoglein 3 expression has been reported in esophageal squamous cell carcinoma, head and neck squamous carcinoma, cervical squamous lesions, lung squamous carcinoma, and additional stratified epithelial malignancies. Because of this lineage-associated expression profile, DSG3 antibodies are frequently used to support identification and characterization of squamous epithelial-derived

tumors.

Desmoglein 3 has additionally attracted interest in autoimmune disease research because DSG3 autoantibodies are pathogenic drivers of pemphigus vulgaris, a blistering disease characterized by disruption of desmosomal adhesion within stratified epithelia. This biologic role further highlights the importance of DSG3 in maintaining epithelial integrity and desmosome-associated tissue architecture.

Immunohistochemistry staining with DSG3 antibodies commonly demonstrates membranous and junctional staining patterns in squamous epithelial cells and squamous carcinoma-associated cellular populations. Strong epithelial-associated staining in esophageal carcinoma tissue aligns with the established distribution of DSG3 in stratified squamous epithelial malignancies and supports the utility of DSG3 as a squamous lineage-associated biomarker.

Analysis of HuProt(TM) protein microarray containing more than 19,000 full-length human proteins demonstrated highly selective binding of clone DSG3/2838 to DSG3. The observed Z-score and elevated S-score support strong target specificity relative to unrelated proteins present on the array, supporting the utility of this monoclonal antibody for selective detection of Desmoglein 3 in epithelial and carcinoma-associated research applications.

Together, the available immunohistochemistry and HuProt microarray specificity data support the use of Desmoglein 3 antibody clone DSG3/2838 for investigating squamous epithelial biology, desmosomal adhesion pathways, and squamous carcinoma-associated differentiation programs.

Explore additional Cancer Antibodies targeting squamous epithelial markers, desmosomal adhesion proteins, and epithelial differentiation-associated signaling pathways.

## Application Notes

Optimal dilution of the Desmoglein 3 Antibody / Squamous Epithelial Marker / DSG3 should be determined by the researcher.

## Immunogen

A recombinant human partial protein (amino acids 379-491) was used as the immunogen for the Desmoglein 3 antibody..

## Storage

Store the Desmoglein 3 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

## Alternate Names

Desmoglein 3 antibody, DSG3 antibody, cadherin family adhesion protein antibody, squamous epithelial marker antibody, desmosomal junction protein antibody