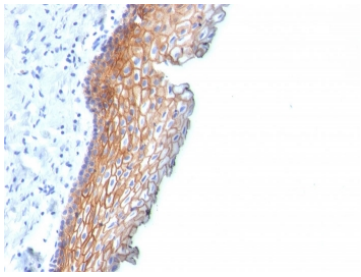
Desmoglein 3 Antibody - HuProt Validated / DSG3 [clone DSG3/2838] (V7932)

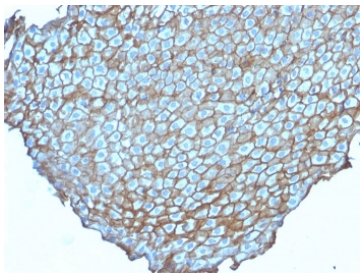
Catalog No.	Formulation	Size
V7932-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7932-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7932SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

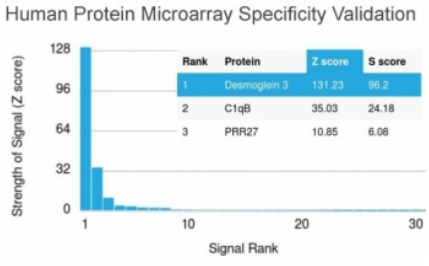
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	DSG3/2838
Purity	Protein G affinity chromatography
UniProt	P32926
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations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



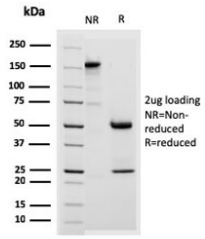
Immunohistochemistry of Desmoglein 3 Antibody-HuProt Validated clone DSG3/2838 in human esophageal carcinoma tissue. Formalin-fixed, paraffin-embedded esophageal carcinoma demonstrates strong membranous staining of tumor epithelial cells, consistent with Desmoglein 3 localization at desmosomal cell-cell junctions in stratified squamous epithelium-derived malignancy. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes followed by cooling prior to staining. The HuProt validated monoclonal antibody clone DSG3/2838 was used as the primary antibody.



IHC staining of FFPE human esophageal carcinoma with Desmoglein 3 antibody HuProt validated clone DSG3/2838. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



Human protein microarray specificity validation of Desmoglein 3 Antibody-HuProt Validated clone DSG3/2838. Analysis was performed using the HuProt(TM) microarray containing more than 19,000 full-length human proteins. The antibody demonstrates the highest signal intensity for Desmoglein 3, ranking first among all proteins tested with a strong Z-score and clear separation from lower ranked proteins, supporting high target specificity of clone DSG3/2838.
Z- and S-score explanation: The Z-score represents the strength of signal generated when the antibody, together with a fluorescently labeled anti-IgG secondary antibody, binds to a specific protein on the HuProt(TM) array. Z-scores are expressed in units of standard deviations above the mean signal of all proteins on the array. Proteins are ranked in descending order according to Z-score. The S-score represents the difference in Z-scores between adjacent ranked proteins and reflects the relative specificity of the antibody for its intended target.



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

Description

Desmoglein 3 Antibody-HuProt Validated clone DSG3/2838 recognizes Desmoglein 3, a calcium-dependent desmosomal cadherin encoded by the DSG3 gene on chromosome 18q12.1. Desmoglein 3, commonly referred to as DSG3 in the literature, is a single-pass transmembrane glycoprotein localized to desmosomes at the plasma membrane of stratified epithelial cells where it mediates strong intercellular adhesion. This Desmoglein 3 antibody is HuProt validated using a human proteome microarray platform containing more than 19,000 full-length human proteins, supporting high target specificity. DSG3 antibody, also known as Desmoglein 3 antibody, is widely used in research focused on epithelial biology, mucocutaneous integrity, and autoimmune blistering disorders. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

Desmoglein 3 belongs to the cadherin superfamily and serves as a core structural component of desmosomal junctions. Its extracellular cadherin repeats mediate calcium-dependent homophilic adhesion between adjacent epithelial cells, while its cytoplasmic domain associates with desmosomal plaque proteins including Plakoglobin and Desmoplakin. Through these interactions, Desmoglein 3 anchors keratin intermediate filaments to the plasma membrane, reinforcing tissue stability in stratified epithelia subjected to mechanical stress such as skin and mucosal surfaces.

DSG3 expression is most prominent in the basal and suprabasal layers of stratified squamous epithelia, including oral mucosa, esophagus, cervix, and epidermis. In contrast to Desmoglein 1, which is enriched in superficial epidermal layers, Desmoglein 3 is concentrated in deeper epithelial layers and plays a central role in maintaining mucocutaneous cohesion. Autoantibodies targeting Desmoglein 3 are strongly associated with pemphigus vulgaris, where disruption of desmosomal adhesion leads to intraepidermal blister formation. Altered DSG3 expression has also been reported in squamous cell

carcinoma and other epithelial malignancies, where changes in desmosomal composition may influence tumor differentiation and progression.

Structurally, Desmoglein 3 contains multiple extracellular cadherin domains, a single transmembrane region, and an intracellular tail that integrates into the desmosomal plaque complex. Beyond its mechanical adhesion function, DSG3 participates in signaling pathways regulating keratinocyte proliferation, differentiation, and epithelial homeostasis. Through proteome-wide HuProt validation and its well-established biological role in desmosomal architecture, Desmoglein 3 remains an important molecular marker in epithelial research.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Desmoglein 3 antibody-HuProt validated clone DSG3/2838 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-HuProt validated clone DSG3/2838.

Storage

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