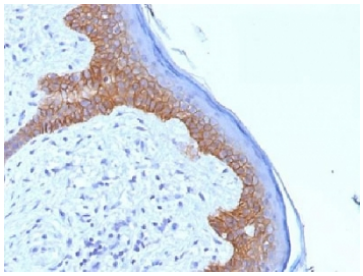
Desmoglein 3 Antibody / DSG3 [clone 5G11] (V3246)

Catalog No.	Formulation	Size
V3246-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3246-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3246SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

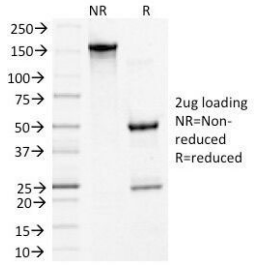
Citations (22)

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	5G11
Purity	Protein G affinity chromatography
UniProt	P32926
Localization	Cell surface
Applications	Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 1-2ug/ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Desmoglein 3 antibody is available for research use only.



Immunohistochemistry analysis of Desmoglein 3 Antibody in human skin tissue. Formalin-fixed, paraffin-embedded human skin sections were stained with Desmoglein 3 Antibody recognizing DSG3 (clone 5G11), followed by HRP-conjugated secondary antibody and DAB chromogen development. Strong membranous staining is observed in epidermal keratinocytes, consistent with desmosomal localization of Desmoglein 3, with hematoxylin nuclear counterstain (blue). Required HIER: boil tissue sections in EDTA, pH9, for 10-20 min.



SDS-PAGE Analysis of Purified, BSA-Free Desmoglein 3 Antibody (clone 5G11). Confirmation of Integrity and Purity of the Antibody.

Description

Desmoglein 3 Antibody targets Desmoglein 3, a calcium-dependent transmembrane cadherin encoded by the DSG3 gene that functions as a core structural component of desmosomes in epithelial tissues. Desmoglein 3 belongs to the desmoglein subfamily within the cadherin superfamily and plays a central role in mediating strong cell-cell adhesion in stratified squamous epithelia. Proper Desmoglein 3 expression and localization are essential for maintaining epithelial tissue integrity and resistance to mechanical stress.

Functionally, Desmoglein 3 participates in calcium-dependent homophilic interactions between adjacent epithelial cells, forming adhesive junctions that anchor intermediate filaments through desmosomal plaque proteins. Through interactions with proteins such as plakoglobin and desmoplakin, DSG3 contributes to the assembly and stability of desmosomes and supports coordinated epithelial architecture. A Desmoglein 3 Antibody enables investigation of desmosomal adhesion mechanisms, epithelial organization, and junctional protein regulation in both physiological and disease-associated contexts.

DSG3 expression is predominantly observed in stratified squamous epithelia, including epidermis, oral mucosa, and other epithelial surfaces subjected to constant mechanical stress. At the cellular level, Desmoglein 3 localizes primarily to the plasma membrane at sites of desmosomal junctions, where it contributes directly to intercellular cohesion. Changes in Desmoglein 3 distribution or expression can reflect alterations in desmosome assembly, epithelial differentiation state, or pathological disruption of cell-cell adhesion.

At the molecular level, Desmoglein 3 contains multiple extracellular cadherin repeat domains responsible for calcium-dependent adhesive interactions, a single transmembrane region, and intracellular domains that mediate binding to desmosomal plaque components. These structural features allow DSG3 to integrate extracellular adhesion with cytoskeletal anchoring, linking mechanical stability to intracellular signaling networks. Regulation of Desmoglein 3 function may involve calcium availability, protein interactions, and post-translational modifications that influence desmosome dynamics.

From a disease relevance perspective, Desmoglein 3 is a well-established autoantigen in pemphigus vulgaris, an autoimmune blistering disorder characterized by loss of epithelial cohesion. Autoantibodies directed against Desmoglein 3 disrupt desmosomal adhesion, leading to acantholysis and intraepidermal blister formation. Altered DSG3 expression or localization has also been investigated in epithelial-derived cancers, where changes in cell-cell adhesion can contribute to tumor progression and tissue remodeling. These disease associations underscore the importance of Desmoglein 3 in maintaining epithelial integrity and regulated tissue architecture.

Monoclonal Desmoglein 3 Antibody clone 5G11 has been cited in peer-reviewed studies examining Desmoglein 3 localization and desmosomal organization in epithelial tissues, supporting its use as a research reagent for studying DSG3-associated cell junction biology. Desmoglein 3 Antibody reagents are valuable tools for investigating desmosome structure, epithelial adhesion mechanisms, and disease-related alterations in cell-cell junctions, with NSJ Bioreagents providing antibodies intended for research use.

Application Notes

Optimal dilution of the Desmoglein 3 antibody should be determined by the researcher.

Immunogen

A recombinant human protein corresponding to the extracellular portion of DSG3 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).

Ordering: Phone: 858.663.9055 | Fax: 1.267.821.0800 | Email: info@nsjbio.com