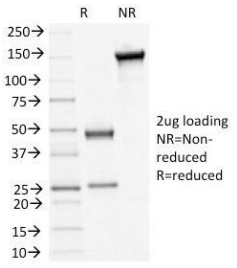
DSG3 Antibody / Desmoglein 3 [clone 5H10] (V3257)

Catalog No.	Formulation	Size
V3257-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3257-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3257SAF-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	5H10
Purity	Protein G affinity chromatography
UniProt	P32926
Localization	Cell surface
Applications	Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 1-2ug/ml Western Blot : 0.5-1ug/ml
Limitations	This Desmoglein 3/DSG3 antibody is available for research use only.



SDS-PAGE Analysis of Purified, BSA-Free DSG3 antibody clone 5H10. Confirmation of Integrity and Purity of the Antibody.

Description

DSG3 Antibody Clone 5H10 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. DSG3 antibody, also known as Desmoglein 3 antibody, is widely used in studies of epithelial differentiation, mucosal biology, and autoimmune blistering disorders. Clone 5H10 serves as a well-characterized monoclonal antibody for detection of DSG3 in stratified squamous epithelia and related malignancies.

Desmoglein 3 is a member of the cadherin superfamily and functions as a core structural component of desmosomal junctions. Its extracellular cadherin repeats mediate calcium-dependent homophilic adhesion between adjacent epithelial cells, while the intracellular domain associates with desmosomal plaque proteins including Plakoglobin and Desmoplakin. Through these interactions, Desmoglein 3 anchors keratin intermediate filaments to the plasma membrane, reinforcing epithelial cohesion in tissues exposed to mechanical stress such as skin, oral mucosa, and esophagus.

Expression of DSG3 is predominantly observed in the basal and immediate suprabasal layers of stratified squamous epithelia. In contrast to Desmoglein 1, which is enriched in superficial epidermal layers, Desmoglein 3 is concentrated in deeper epithelial compartments and plays a critical role in maintaining mucocutaneous stability. 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 carcinomas and other epithelial malignancies, making DSG3 antibody an important marker in dermatopathology and oncologic research.

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 adhesive role, DSG3 participates in signaling pathways influencing keratinocyte proliferation and epithelial differentiation. Through its consistent detection of membranous DSG3 expression in epithelial tissues, Desmoglein 3 Antibody Clone 5H10 provides a reliable tool for investigating desmosomal biology and mucocutaneous disease mechanisms.

Explore our Desmoglein 3 Antibody - Human Protein Microarray Validated Clone DSG3/2838 page for a broader view of DSG3 expression in stratified epithelia with supporting microarray specificity validation data.

Application Notes

Optimal dilution of the DSG3 antibody clone 5H10 should be determined by the researcher.

Immunogen

A recombinant human protein corresponding to the extracellular portion of Desmoglein 3 was used as the immunogen for the DSG3 antibody clone 5H10.

Storage

Store the Desmoglein 3/DSG3 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).