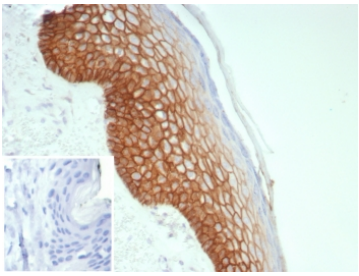
DSG3 Antibody Recombinant Mouse MAb / Desmoglein 3 [clone rDSG3/8612] (V4570)

Catalog No.	Formulation	Size
V4570-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4570-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4570SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

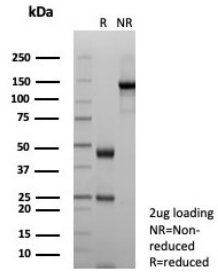
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rDSG3/8612
Purity	Protein A/G affinity
UniProt	P32926
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This DSG3 antibody is available for research use only.



Immunohistochemistry of DSG3 antibody in human skin tissue. Formalin-fixed, paraffin-embedded human skin demonstrates strong membranous staining predominantly in basal and suprabasal keratinocytes, consistent with Desmoglein 3 localization at desmosomal cell-cell junctions within stratified squamous epithelium. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining. The recombinant mouse monoclonal antibody clone rDSG3/8612 was used as the primary antibody. Inset: PBS was used in place of the primary antibody as a secondary antibody negative control.



SDS-PAGE analysis of purified, BSA-free DSG3 antibody recombinant mouse mAb clone rDSG3/8612 as confirmation of integrity and purity.

Description

DSG3 Antibody Recombinant Mouse mAb clone rDSG3/8612 recognizes Desmoglein 3, a calcium-dependent desmosomal cadherin encoded by the DSG3 gene on chromosome 18q12.1. Desmoglein 3, also 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 and supports epithelial structural integrity. DSG3 antibody, also known as Desmoglein 3 antibody, is widely used in research focused on epithelial biology, mucosal differentiation, and autoimmune blistering diseases. This recombinant mouse monoclonal antibody supports detection of membranous DSG3 expression in epithelial tissues.

Desmoglein 3 is a member of the cadherin superfamily and functions as a core 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 mechanical stability in tissues exposed to friction and shear stress, particularly mucosal epithelia and basal epidermal layers.

Expression of DSG3 is predominantly observed in the basal and suprabasal layers of stratified squamous epithelia, including oral mucosa, esophagus, cervix, and skin. In contrast to Desmoglein 1, which is enriched in superficial epidermal layers, Desmoglein 3 is more abundant in deeper epithelial layers and plays a critical role in maintaining mucocutaneous adhesion. Autoantibodies directed against 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.

Structurally, Desmoglein 3 contains multiple extracellular cadherin domains, a transmembrane region, and an intracellular tail that anchors to the desmosomal plaque complex. Beyond structural adhesion, DSG3 participates in signaling pathways that influence keratinocyte proliferation, differentiation, and epithelial homeostasis. Dysregulated expression may contribute to altered epithelial architecture and tumor progression in stratified epithelia. Through its essential role in desmosomal cohesion, Desmoglein 3 remains central to research in epithelial adhesion 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 recombinant mouse mAb should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 300-500) from the human protein was used as the immunogen for the DSG3 antibody recombinant mouse mAb.

Storage

Aliquot the DSG3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.