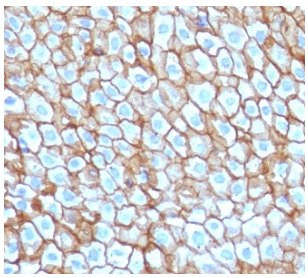
DSG3 Antibody Mouse Monoclonal CFM6-1 / Desmoglein 3 [clone CFM6-1] (V7978)

Catalog No.	Formulation	Size
V7978-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7978-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7978SAF-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	CFM6-1
Purity	Protein G affinity chromatography
UniProt	P32926
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This DSG3 antibody is available for research use only.



Immunohistochemistry of DSG3 Antibody Mouse Monoclonal CFM6-1 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 mouse monoclonal antibody clone CFM6-1 was used as the primary antibody.

Description

DSG3 Antibody Mouse Monoclonal CFM6-1 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 transmembrane glycoprotein localized to desmosomes at the cell membrane of stratified epithelial cells. DSG3 antibody, also known as Desmoglein 3 antibody, is widely used in research focused on epithelial adhesion, mucosal differentiation, and autoimmune blistering diseases. This mouse monoclonal antibody clone CFM6-1 supports specific detection of membranous DSG3 expression in epithelial tissues.

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 cells, while its cytoplasmic domain interacts with desmosomal plaque proteins such as Plakoglobin and Desmoplakin. These interactions anchor keratin intermediate filaments to the plasma membrane, reinforcing intercellular cohesion in tissues subjected to mechanical stress, including skin and mucosal epithelia.

DSG3 expression is predominantly observed in the basal and immediate suprabasal layers of stratified squamous epithelia, including oral mucosa, esophagus, cervix, and epidermis. In contrast to Desmoglein 1, which is more prominent in upper epidermal layers, Desmoglein 3 is enriched in deeper epithelial layers and is essential for maintaining mucocutaneous integrity. 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 described in squamous cell carcinomas and other epithelial malignancies, where changes in desmosomal composition may influence tumor behavior and differentiation status.

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 that regulate keratinocyte proliferation, differentiation, and epithelial homeostasis. Through its central role in desmosomal architecture and epithelial stability, Desmoglein 3 remains an important marker for studies of epithelial 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

The stated application concentrations are suggested starting points. Titration of the DSG3 antibody mouse monoclonal CFM6-1 may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 379-491 were used as the immunogen for the DSG3 antibody mouse monoclonal.

Storage

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