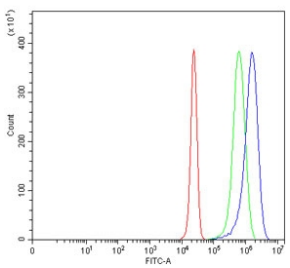
# DSG3 Antibody Rabbit Polyclonal / Desmoglein 3 (RQ6975)

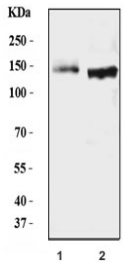
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ6975 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | P32926 |
| **Applications** | Western blot: 0.5-1 ug/ml<br>Flow cytometry: 1-3ug/million cells<br>Direct ELISA: 0.1-0.5ug/ml |
| **Limitations** | This DSG3 antibody is available for research use only. |




DSG3 Antibody FACS. Flow cytometry testing of human HepG2 cells with DSG3 antibody rabbit polyclonal at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= DSG3 antibody.




DSG3 Antibody WB. Western blot testing of human 1) A431 and 2) HaCaT cell lysate with DSG3 antibody rabbit polyclonal. Predicted molecular weight: 107 kDa but may be observed at higher molecular weights due to glycosylation.

## Description

DSG3 Antibody Rabbit Polyclonal 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 maintains epithelial structural integrity. DSG3 antibody, also known as Desmoglein 3 antibody, is widely used in research focused on epithelial differentiation, mucosal biology, and autoimmune blistering disorders. This rabbit polyclonal antibody supports detection of membranous DSG3 expression in stratified epithelia.

Desmoglein 3 belongs to the cadherin superfamily and functions as a critical component of desmosomal junctions. Its extracellular cadherin repeats enable calcium-dependent homophilic binding between adjacent cells, while the intracellular region associates with desmosomal plaque proteins including Plakoglobin and Desmoplakin. Through these interactions, Desmoglein 3 connects to keratin intermediate filaments, reinforcing cell-cell adhesion in tissues subjected to mechanical stress such as the epidermis and mucosal linings.

Expression of DSG3 is most prominent in the basal and immediate suprabasal layers of stratified squamous epithelia, including oral mucosa, esophagus, cervix, and skin. In contrast to Desmoglein 1, which is enriched in upper epidermal layers, Desmoglein 3 is concentrated in deeper epithelial layers and is essential for maintaining mucocutaneous cohesion. Autoantibodies 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 carcinoma and other epithelial malignancies, where changes in desmosomal composition may influence tumor progression and invasion.

Structurally, Desmoglein 3 contains multiple extracellular cadherin domains, a single transmembrane segment, and an intracellular tail that integrates into the desmosomal plaque complex. Beyond mechanical adhesion, DSG3 participates in signaling pathways regulating keratinocyte proliferation, differentiation, and epithelial homeostasis. Through its essential role in desmosomal architecture and epithelial stability, Desmoglein 3 remains a key molecule in studies of epithelial biology and mucocutaneous disease.

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 rabbit polyclonal should be determined by the researcher.

## Immunogen

Recombinant human protein (amino acids R384-Q957) was used as the immunogen for the DSG3 antibody rabbit polyclonal.

## Storage

After reconstitution, the DSG3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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