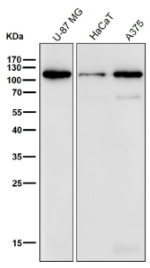
DSC1 Antibody / Desmocollin 1 [clone 31D56] (FY13356)

Catalog No.	Formulation	Size
FY13356	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

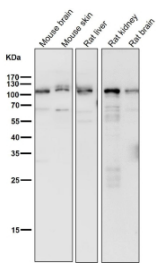
Recombinant RABBIT MONOCLONAL

Bulk quote request

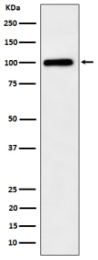
Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31D56
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q08554
Applications	Western Blot : 1:500-1:2000
Limitations	This DSC1 antibody is available for research use only.



Western blot testing of human samples using the BCLAF1 antibody at 1:1000 dilution for 1 hour at room temperature. Predicted molecular weight ~100 kDa.



Western blot testing of mouse and rat samples using the BCLAF1 antibody at 1:1000 dilution for 1 hour at room temperature. Predicted molecular weight ~100 kDa.



Western blot analysis of Desmocollin 1 expression in human A375 cell lysate using BCLAF1 antibody. Predicted molecular weight ~100 kDa.

Description

DSC1 antibody detects Desmocollin 1, encoded by the DSC1 gene. Desmocollin 1 is a calcium-dependent glycoprotein and a member of the cadherin superfamily that forms part of desmosomes, specialized structures mediating cell-cell adhesion in epithelial tissues. DSC1 antibody provides researchers with an important reagent for studying adhesion, epidermal integrity, and disease processes involving skin and epithelial biology.

Desmocollin 1 is a transmembrane protein that interacts with desmogleins, plakoglobin, and desmoplakin to form stable desmosomal junctions. Research using DSC1 antibody has shown that it is expressed predominantly in stratified squamous epithelia, where it contributes to strong intercellular adhesion. This adhesion maintains tissue integrity under mechanical stress, particularly in the skin and mucosal surfaces.

Studies with DSC1 antibody have revealed that Desmocollin 1 exists in multiple isoforms generated by alternative splicing. These isoforms contribute to structural diversity within desmosomes and enable fine-tuning of adhesive strength. Regulation of isoform expression is developmentally controlled and varies between epithelial layers, suggesting specialized functions for different Desmocollin 1 variants.

Dysregulation of Desmocollin 1 is linked to disease. Research using DSC1 antibody has demonstrated that mutations in DSC1 cause striate palmoplantar keratoderma, a skin disorder characterized by thickening of the palms and soles. Autoantibodies against Desmocollin 1 are found in autoimmune skin diseases such as pemphigus. Loss of Desmocollin 1 expression has also been reported in cancers, where reduced adhesion facilitates invasion and metastasis. These findings highlight the importance of DSC1 in health and disease.

Desmocollin 1 also contributes to barrier function. Studies with DSC1 antibody have shown that intact desmosomal adhesion prevents pathogen invasion and regulates paracellular permeability. This function underscores the role of Desmocollin 1 not only in mechanical integrity but also in defense and tissue homeostasis.

DSC1 antibody is commonly applied in immunohistochemistry, immunofluorescence, and western blotting. Immunohistochemistry highlights localization in epithelial layers, immunofluorescence reveals colocalization with other desmosomal proteins at junctions, and western blotting detects isoform expression. These applications make DSC1 antibody essential for adhesion biology and pathology research.

By providing validated DSC1 antibody reagents, NSJ Bioreagents supports studies into epithelial adhesion, skin disease, and cancer. Detection of Desmocollin 1 provides insight into how desmosomal proteins maintain tissue structure and how their disruption leads to disease.

Application Notes

Optimal dilution of the DSC1 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Desmocollin 1 was used as the immunogen for the DSC1 antibody.

Storage

Store the DSC1 antibody at -20oC.