abcam

ab201968

Anti-Desmoglein 3/PVA antibody [6G2C11]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human DSG3 aa 50-200. The exact immunogen used to generate this antibody is proprietary information. Database link P32926
Clone number	6G2C11
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/200 - 1/400

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Target data

See full target information DSG3

Function

A component of desmosome cell-cell junctions which are required for positive regulation of cellular adhesion (PubMed:31835537). Required for adherens and desmosome junction assembly in response to mechanical force in keratinocytes (PubMed:31835537). Required for desmosome-mediated cell-cell adhesion of cells surrounding the telogen hair club and the basal layer of the outer root sheath epithelium, consequently is essential for the anchoring of telogen hairs in the hair follicle (PubMed:9701552). Required for the maintenance of the epithelial barrier via promoting desmosome-mediated intercellular attachment of suprabasal epithelium to basal cells (By similarity). May play a role in the protein stability of the desmosome plaque components DSP, JUP, PKP1, PKP2 and PKP3 (PubMed:22294297). Required for YAP1 localization at the plasma membrane in keratinocytes in response to mechanical strain, via the formation of an interaction complex composed of DSG3, PKP1 and YWHAG (PubMed:31835537). May also be involved in the positive regulation of YAP1 target gene transcription and as a result cell proliferation (PubMed:31835537). Positively regulates cellular contractility and cell junction formation via organization of cortical F-actin bundles and anchoring of actin to tight junctions, in conjunction with RAC1 (PubMed:22796473). The cytoplasmic pool of DSG3 is required for the localization of CDH1 and CTNNB1 at developing adherens junctions, potentially via modulation of SRC activity (PubMed:22294297). Inhibits keratinocyte migration via suppression of p38MAPK signaling, may therefore play a role in moderating wound healing (PubMed:26763450).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Desmoglein 3 (DSG3) also known as anti-DSG3 is an important component in maintaining cellular adhesion within epithelial tissues. It belongs to the cadherin family and has a mass of approximately 130 kDa. You will find DSG3 expressed mainly in epithelial cells particularly in the skin and mucosal linings. As a transmembrane glycoprotein DSG3 interacts with other desmoglein proteins such as desmoglein 1 to form desmosomes which are essential for the mechanical coupling of cells.
Biological function summary	This protein plays a fundamental role in cell adhesion by contributing to the integrity and strength of desmosomes. These are multi-protein complexes that secure cell-to-cell attachments in tissues exposed to mechanical stress. Within the desmosomes DSG3 interacts closely with other proteins including plakoglobin and plakophilins ensuring the stability of the cellular junctions. This makes DSG3 an integral part of maintaining tissue structure and resilience.
Pathways	Desmoglein 3 participates notably in the WNT signaling pathway and is involved in pathways associated with cell adhesion. In these pathways its interaction with plakoglobin which is also known as gamma-catenin plays an important role. This interaction influences signaling processes that modulate cellular adhesion and proliferation. Desmosomes facilitated by DSG3 are connective points in epidermal growth regulation pathways emphasizing DSG3's involvement in cellular cohesion and communication.
Associated diseases and disorders	Desmoglein 3 is strongly linked to the autoimmune disease pemphigus vulgaris. In this condition autoantibodies target DSG3 disrupting its function in desmosomes and leading to blistering of the skin and mucous membranes. Desmoglein 3's relationship with desmoglein 1 is also relevant in the disease process as these proteins' shared function in cell adhesion becomes compromised. Therefore

understanding DSG3's interactions and functions is vital for exploring therapeutic strategies in treating such disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

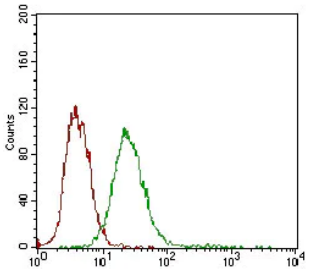
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

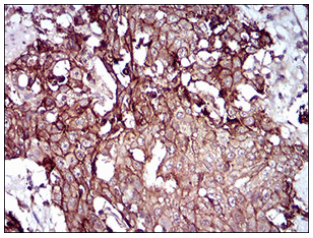
6 product images



Flow Cytometry - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

Desmoglein 3/PVA Flow Cytometry staining using mouse Anti-Desmoglein 3/PVA antibody

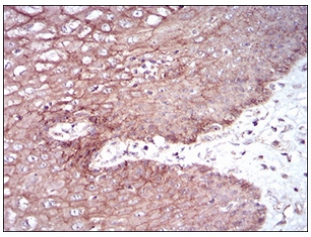
Flow cytometric analysis of A431 cells labeling Desmoglein 3/PVA with ab201968 at 1/200 dilution (green). Negative control (red).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

Desmoglein 3/PVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Desmoglein 3/PVA antibody

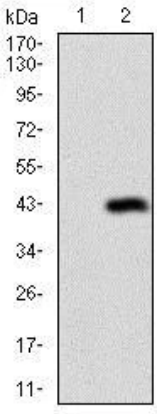
Immunohistochemical analysis of Paraffin-embedded Human esophageal cancer tissue labeling Desmoglein 3/PVA with ab201968 at 1/200 dilution followed by DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

Desmoglein 3/PVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Desmoglein 3/PVA antibody

Immunohistochemical analysis of Paraffin-embedded Human esophageal tissue labeling Desmoglein 3/PVA with ab201968 at 1/200 dilution followed by DAB staining.



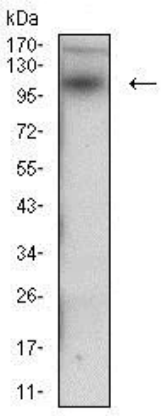
Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

All lanes:
Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968) at 1/500 dilution

Lane 1:
HEK293 cell lysate

Lane 2:
Human Desmoglein 3/PVA recombinant (aa55-159)-hIgGFc transfected HEK293 cell lysate

Predicted band size: 108 kDa

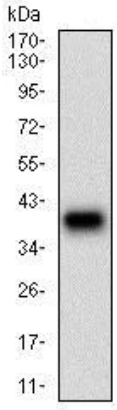


Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

All lanes:
Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968) at 1/500 dilution

All lanes:
A431 cell lysate

Predicted band size: 108 kDa



Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968)

(Expected MW is 37.5 kDa)
All lanes:
Western blot - Anti-Desmoglein 3/PVA antibody [6G2C11] (ab201968) at 1/500 dilution

All lanes:
Human Desmoglein 3/PVA recombinant (aa55-159) protein

Predicted band size: 108 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.