Human Desmoglein-3 Antibody

Monoclonal Mouse IgG_{2B} Clone # 216519

Catalog Number: MAB1720

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Desmoglein-3 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) Desmoglein-1, rhDesmoglein-2, or rhCadherin-17 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 216519
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Desmoglein-3 Glu50-Arg615 Accession # P32926
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

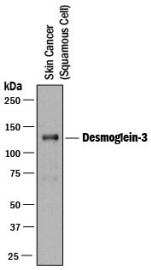
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

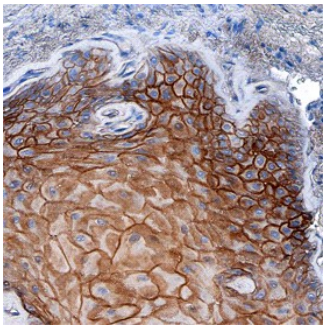
DATA

Western Blot



Detection of Human Desmoglein-3 by Western Blot. Western blot shows lysates of human skin cancer (squamous cell carcinoma) tissue. PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human Desmoglein-3 Monoclonal Antibody (Catalog # MAB1720) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Desmoglein-3 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Desmoglein-3 in Human Squamous Cell Carcinoma. Desmoglein-3 was detected in immersion fixed paraffin-embedded sections of human squamous cell carcinoma using Mouse Anti-Human Desmoglein-3 Monoclonal Antibody (Catalog # MAB1720) at 8 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membranes of keratinocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Desmoglein-3, also known as pemphigus vulgaris antigen (PVA), is a 130 kDa transmembrane glycoprotein that belongs to the cadherin family of calcium dependent adhesion molecules (1-3). Human Desmoglein-3 is synthesized with a 26 amino acid (aa) propeptide. The mature protein consists of a 566 aa extracellular domain (ECD) that contains four cadherin-like domains, a 25 aa transmembrane segment, and a 359 aa cytoplasmic domain (4). Within the ECD, human Desmoglein-3 shares 78% aa sequence identity with mouse and rat Desmoglein-3. It shares 44%, 47%, and 56% aa sequence identity with Desmoglein-1, -2, and -4 respectively. Desmoglein-3 is one of the principal components of desmosomes which form adhesive contacts between epithelial cells (1, 2). It is expressed in the basal and suprabasal layers of stratified epithelia in many tissues (4-6). During apoptosis, Desmoglein-3 is cleaved by caspases, plus MMP-2, and MMP-9 at sites within the cytoplasmic and extracellular regions, resulting in shortened transmembrane forms and a soluble 75 kDa ECD fragment (7, 8). The downregulation of Desmoglein-3 in oral squamous cell carcinoma correlates with metastatic potential (9). Desmoglein-3 is the target of autoantibodies in pemphigus vulgaris, a blistering skin disorder with compromised inter-keratinocyte adhesion (6, 10). Binding of these antibodies triggers Desmoglein-3 internalization and degradation by keratinocytes (10).

References:

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