

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Desmoglein-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human (rh) Desmoglein-1 and rhDesmoglein-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Desmoglein-3 Glu50-Arg615 Accession # P32926
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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).

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