

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Desmoglein-1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Desmoglein-2 is observed and less than 1% cross-reactivity with rhDesmoglein-3, rhDesmoglein-4, and recombinant mouse Desmoglein-1 alpha is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Desmoglein-1 extracellular domain Glu50-His545 Accession # Q02413
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 as a 0.2 µm filtered solution in PBS.

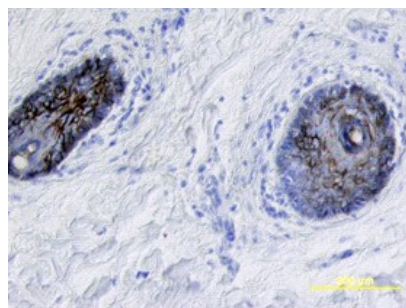
APPLICATIONS

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	0.1 µg/mL	Recombinant Human Desmoglein-1 Fc Chimera (Catalog # 944-DM)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Desmoglein-1 in Human Skin.

Desmoglein-1 was detected in immersion fixed paraffin-embedded sections of human skin using Goat Anti-Human Desmoglein-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF944) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <ul style="list-style-type: none"> • 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.

BACKGROUND

Desmoglein-1 is one of three members of the desmoglein subfamily of calcium-dependent cadherin cell adhesion molecules. Together with desmocollins, another subfamily within the cadherin superfamily, the desmoglein isoforms form the adhesive components of desmosomes, the cell-cell adhesive structures that are found in epithelial cells. Human Desmoglein-1 is a type I transmembrane glycoprotein of 1049 amino acid (aa) residues with a 23 aa signal peptide and a 26 aa propeptide. It differs from other classic cadherins by having four instead of five cadherin repeat domains in its extracellular region, and a much larger cytoplasmic region containing five desmoglein repeat domains which share homology with the cadherin repeats. Instead of having the HAV adhesion motif found in type I cadherins, Desmoglein-1 has R/YAL as the adhesion motif on its amino-terminal cadherin repeat. The cytoplasmic tail of Desmoglein-1 interacts with desmoplakins, plakoglobin and plakophilins. In turn, these proteins link the Desmoglein-1 with the intermediate filaments. Desmoglein-1 has been shown to be important in establishing cell-cell adhesion and function in the epidermis. In the autoimmune skin disease pemphigus foliaceus, autoantibodies to Desmoglein-1 can cause the loss of keratinocyte adhesion resulting in blisters.

References:

1. Nollet, R. *et al.* (2000) *J. Mol. Biol.* **299**:551.
2. Elias, P. *et al.* (2001) *J. Cell Biol.* **153**:243.