

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Desmoglein-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 25-50% cross-reactivity with recombinant human (rh) Desmoglein-1 is observed and no cross-reactivity with rhDesmoglein-3 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 141409
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Desmoglein-2 Ala50-Gly608 (predicted) Accession # CAA81226
<b>Formulation</b>	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.

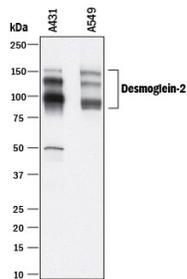
## APPLICATIONS

**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
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	5-25 µg/mL	See Below
<b>Simple Western</b>	20 µg/mL	See Below

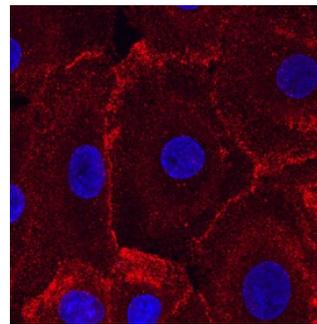
## DATA

### Western Blot



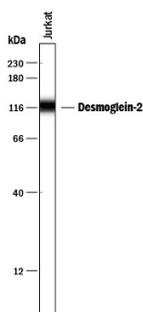
**Detection of Human Desmoglein-2 by Western Blot.** Western blot shows lysates of A431 human epithelial carcinoma cell line and A549 human lung carcinoma cell line. PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human Desmoglein-2 Monoclonal Antibody (Catalog # MAB947) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for Desmoglein-2 at approximately 90-160 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

### Immunocytochemistry



**Desmoglein-2 in NHEK Human Cells.** Desmoglein-2 was detected in immersion fixed NHEK human normal epidermal keratinocytes using Mouse Anti-Human Desmoglein-2 Monoclonal Antibody (Catalog # MAB947) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and cell junctions. View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

### Simple Western



**Detection of Human Desmoglein-2 by Simple Western™.** Simple Western lane view shows lysates of Jurkat human acute T cell leukemia cell line, loaded at 0.2 mg/mL. A specific band was detected for Desmoglein-2 at approximately 120 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human Desmoglein-2 Monoclonal Antibody (Catalog # MAB947). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Desmoglein-2 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-2 is a type I transmembrane glycoprotein of 1117 amino acid (aa) residues with a 23 aa signal peptide and a 25 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, desmogleins have R/YAL as the adhesion motif on its amino-terminal cadherin repeat. The cytoplasmic tails of desmogleins interact with desmoplakins, plakoglobin and plakophilins. In turn, these proteins link the desmogleins with the intermediate filaments. Desmoglein-2 has been shown to be important in establishing cell-cell adhesion and function in epithelial cells. Desmoglein-2 was originally identified in colon carcinoma and colon, and was named HDGC (human desmoglein colon).

## References:

1. Nollet, R. *et al.* (2000) J. Mol. Biol. **299**:551.
2. Elias, P. *et al.* (2001) J. Cell Biol. **153**:243.
3. Arneemann, J. *et al.* (1992) Genomics **13**:484.