Recombinant Human Desmoglein-3 His-tag

Catalog Number: 11167-DM

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Desmoglein-3 protein Glu24-Lys499, with a C-terminal 6-His tag Accession # P32926.2
N-terminal Sequence Analysis	Glu24 & Glu50
Predicted Molecular Mass	56 kDa & 53 kDa

SPECIFICATIONS

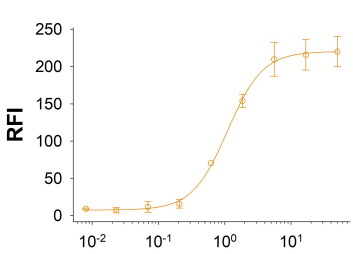
SDS-PAGE	57-67 kDa, under reducing conditions.
Activity	Measured by the ability of immobilized Recombinant Human Desmoglein-3 His-tag (Catalog # 11167-DM) to support the adhesion of Caki-2 human clear cell carcinoma epithelial cells. The ED_{50} for this effect is 0.750-6.00 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

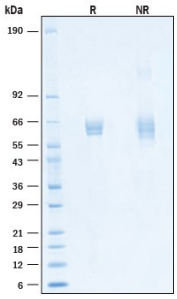
DATA

Bioactivity



Recombinant Human Desmoglein-3 His-tag Protein Bioactivity. Measured by the ability of immobilized Recombinant Human Desmoglein-3 His-tag Protein (Catalog # 11167-DM) to support the adhesion of Caki-2 human clear cell carcinoma epithelial cells. The ED_{50} for this effect is 0.750-6.00 µg/mL.

SDS-PAGE



Recombinant Human Desmoglein-3 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human Desmoglein-3 His-tag Protein (Catalog # 11167-DM) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 57-67 kDa.

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Recombinant Human Desmoglein-3 His-tag

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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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