

DSG-2/Desmoglein-2 Protein, Human, Recombinant (His)

General Information

Synonyms:	CMD1BB;Desmoglein-2;ARVC10;CDHF5;MGC117037;MGC117036;HDGC;DSG2
Protein Construction:	Ala50-Gly609
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q14126
Molecular Weight:	63.6 kDa (predicted). Due to glycosylation, the protein migrates to 75-80 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human DSG-2, His Tag at 0.5µg/ml (100µl/well) on the plate. Dose response curve for Anti-DSG-2 Antibody, hFc Tag with the EC50 of 10.7ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Desmoglein-2 (DSG-2) as the primary high-affinity receptor used by adenoviruses Ad3, Ad7, Ad11 and Ad14. These serotypes represent key human pathogens causing respiratory and urinary tract infections. In epithelial cells, adenovirus binding of DSG-2 triggers events reminiscent of epithelial-to-mesenchymal transition, leading to transient opening of intercellular junctions.

Reference

Wang H, et al. Desmoglein 2 is a receptor for adenovirus serotypes 3, 7, 11 and 14. Nat Med. 2011 Jan;17(1):96-104. doi: 10.1038/nm.2270. Epub 2010 Dec 12. PMID: 21151137; PMCID: PMC3074512.

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