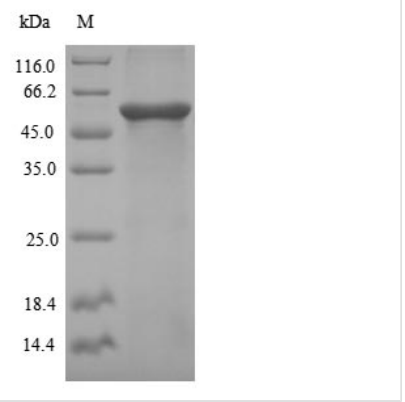
Recombinant Human Desmoglein-3 (DSG3), partial

Product Code	CSB-EP007205HU(F)
Relevance	Component of intercellular desmosome junctions. Involved in the interaction of plaque proteins and intermediate filaments mediating cell-cell adhesion.
Abbreviation	Recombinant Human DSG3 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P32926
Alias	130 kDa pemphigus vulgaris antigen ;PVACadherin family member 6
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	IAKITSDYQATQKITYRISGVGIDQPPFGIFVVDKNTGDINITAIVDREETPSFLITC RALNAQGLDVEKPLILTVKILDINDNPPVFSQQIFMGEIEENSASNSLVMILNATD ADEPNHLNSKIAFKIVSQEPAGTPMFLLSRNTGEVRTLTNSLDREQASSYRLVV SGADKDGEGLSTQCECNIKVKDVNDNFPMFRDSQYSARIEENILSSELLRFQV TDLDEEYTDNWLAVYFFTSGNEGNWFEIQTDPRTNEGILKVVKALDYEQLQSV KLSIAVKNKAEFHQSVISRYRVQSTPVTIQVINVREGIAFRPASKTFTVQKGISSK KLVDYILGTYQAIDEDTNKAASNVKYVMGRNDGGYLMIDSKTAEIKFVKNMNR DSTFIVNKTITAEVLAIDEYTGKTSTGTVYVRVPDFNDNCPTAVLEK
Research Area	Cell Adhesion
Source	E.coli
Target Names	DSG3
Expression Region	70-499aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	64.0kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human Desmoglein-3 (DSG3) is expressed in E.coli and covers the 70-499 amino acid region of the protein. The protein carries an N-terminal 6xHis-SUMO tag to help with purification, reaching a purity level greater than 90% as confirmed by SDS-PAGE analysis. This recombinant protein is designed for research use only and provides reliable quality for experimental work, though no specific endotoxin level is specified.

Desmoglein-3 appears to be a key component of desmosomes—specialized structures that help cells stick together in epithelial tissues. The protein seems particularly important for maintaining tissue integrity and cohesion, especially in skin and mucous membranes. Research into DSG3's function and interactions may prove valuable for studies on cell adhesion, tissue development, and related diseases.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation Studies

This DSG3 fragment (aa 70-499) could work as an immunogen or antigen for creating monoclonal or polyclonal antibodies against human desmoglein-3. The N-terminal His-SUMO tag makes purification and immobilization easier for immunization protocols or screening assays. Scientists might find this protein useful for validating antibody specificity through ELISA, Western blot, or surface plasmon resonance assays. The high purity (>90%) likely minimizes cross-reactivity issues during antibody characterization studies.

2. Protein-Protein Interaction Studies

The His-SUMO tagged DSG3 fragment may work well in pull-down assays to identify and study binding partners or interacting proteins from cell lysates or purified protein libraries. The His tag allows for immobilization on nickel-affinity matrices, while the SUMO tag offers additional purification options and might

improve protein stability. This setup could help researchers explore DSG3's molecular interactions within desmosomal complexes or other cellular pathways under controlled in vitro conditions.

3. Structural and Biophysical Characterization

This purified DSG3 fragment spanning amino acids 70-499 appears suitable for structural biology studies, including X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy. The high purity level should support biophysical analyses such as dynamic light scattering, circular dichroism spectroscopy, or analytical ultracentrifugation to examine protein folding, stability, and oligomerization states. The defined expression region may allow for systematic structure-function relationship studies of specific DSG3 domains.

4. ELISA-Based Binding and Competition Assays

The His-SUMO tagged DSG3 protein can be attached to ELISA plates or biosensor surfaces for quantitative binding studies with potential ligands, other desmosomal proteins, or small molecule compounds. Researchers might run competition assays to determine binding affinities and specificities of various interacting molecules. The tag system likely helps with oriented immobilization and consistent protein presentation for reproducible binding measurements in high-throughput screening applications.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.