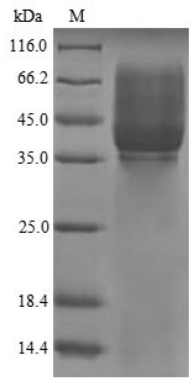
Recombinant Pig Cadherin-3 (CDH3)

Product Code	CSB-YP005052PIa4
Relevance	Cadherins are calcium-dependent cell adhesion proteins. They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types.
Abbreviation	Recombinant Pig CDH3 protein
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.	O18926
Product Type	Recombinant Protein
Immunogen Species	Sus scrofa (Pig)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	KIAKYELFGHAVSENGASVEEPMNISIIVTDQNDHKPKFTQDVFRGSVLEGVLP GTSVMQVTATDEDDAINTYNGVVAYSILSQEPKDPHDLMFTVHRSTGAISVISS GLDRERVPEYTLTIQATDMDGDGSSTTATAIVEILDA
Research Area	Signal Transduction
Source	Yeast
Target Names	CDH3
Protein Names	Placental cadherin
Expression Region	1-145aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMOSTAR-tagged
Mol. Weight	31.6kDa
Protein Length	Full Length
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.
The reducing (R) protein migrates as 43 kDa in SDS-PAGE may be due to glycosylation.
Recommended Product

Description

Recombinant Pig Cadherin-3 (CDH3) is produced in a yeast expression system and carries an N-terminal 6xHis-sumostar tag. The protein spans the complete 1-145 amino acid sequence, which appears to provide thorough structural coverage. SDS-PAGE analysis shows purity levels exceeding 90%, suggesting it's well-suited for research applications. This product is meant exclusively for research purposes—not for diagnostic or therapeutic use.

Cadherin-3, also called CDH3, belongs to the classical cadherin family of proteins that mediate cell-cell adhesion. It plays what seems to be a central role in maintaining tissue structure and cellular communication. The protein is likely involved in pathways controlling cell growth, differentiation, and movement. Research into how Cadherin-3 interacts with other molecules and how it's regulated may offer important clues about development and tissue healing, which is why cell biologists focus considerable attention on it.

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 recombinant pig CDH3 fragment (1-145aa) could work as an immunogen or coating antigen for creating antibodies specific to porcine cadherin-3. The N-terminal 6xHis-sumostar tag makes purification and immobilization straightforward for ELISA-based screening and characterization work. With purity above 90%, the protein should give consistent, reliable results in antibody binding experiments. Researchers working with pig models or developing tools for porcine cell biology might find this particularly useful.

2. Protein-Protein Interaction Studies

The His-tagged CDH3 fragment works well in pull-down experiments to hunt for potential binding partners from pig cell lysates or tissue samples. The tag allows easy attachment to nickel-affinity columns for capturing associated proteins, which can then be identified through mass spectrometry or Western blots. Since this covers the N-terminal extracellular region of cadherin-3, it may still retain structural features important for the homophilic or heterophilic binding that's typical of cadherins.

3. Biochemical Characterization and Structural Studies

This purified CDH3 fragment gives researchers material for fundamental biochemical work—protein folding experiments, thermal stability tests, and basic structural analysis using techniques like circular dichroism spectroscopy. The well-defined sequence (1-145aa) and high purity make it reasonable to use for biophysical studies exploring the structural characteristics of pig cadherin-3's N-

terminal region. Such work could provide baseline data for comparing this protein with other cadherin family members.

4. Cell Adhesion Assay Development

The recombinant CDH3 fragment can serve as a coating substrate in cell-based adhesion experiments to investigate how cadherins mediate cell attachment in porcine cell lines. The His-tag makes it possible to control immobilization and measure protein levels on assay plates, creating more standardized experimental setups. This approach supports studies of cadherin function in pig cell biology and may help researchers build in vitro models for examining cell-cell adhesion mechanisms.

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.