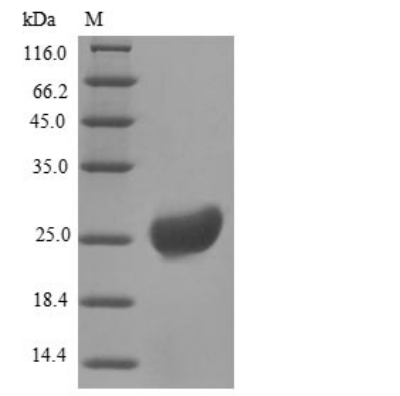
Recombinant Bovine Resistin (RETN)

Product Code	CSB-EP019573BOa2
Relevance	Hormone that seems to suppress insulin ability to stimulate glucose uptake into adipose cells. Potentially links obesity to diabetes
Abbreviation	Recombinant Bovine RETN 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.	Q762I5
Product Type	Recombinant Protein
Immunogen Species	Bos taurus (Bovine)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	QSLCPIDKAISEKIQEVTTSLVPGAVRIIGLDCRSVTSRGSLVTCPSGFAVTGCT CGSACGSWDVRAETTCHCQCAGMDWTGARCCRLHIQ
Research Area	Cardiovascular
Source	E.coli
Target Names	RETN
Protein Names	RSTN
Expression Region	19-109aa
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	25.6 kDa
Protein Length	Full Length of Mature Protein
Image	 (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Bovine Resistin (RETN) gets produced in E.coli and includes the complete mature protein sequence from amino acids 19 to 109. The protein carries an N-terminal 6xHis-SUMO tag, which helps with purification and detection processes. SDS-PAGE analysis shows the product purity exceeds 85%. This preparation is meant strictly for research purposes and appears to offer a dependable option for experimental work.

Resistin is a cysteine-rich protein that cells secrete, and it seems to be involved in several biological processes like inflammation and how the body handles metabolism. The protein likely plays a significant role in creating insulin resistance and has drawn considerable attention in studies of metabolic and inflammatory pathways. Because resistin participates in these systems, it has become an important target for research into metabolic disorders and how immune responses work.

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 bovine resistin may work well as an immunogen for creating antibodies that specifically target bovine resistin in research settings. The N-terminal 6xHis-SUMO tag makes purification easier and helps with immobilization during antibody screening tests. With purity levels above 85%, there's likely minimal cross-reactivity when running immunization protocols. Scientists can incorporate this protein into ELISA-based validation studies and use it as a Western blot control when detecting bovine resistin.

2. Protein-Protein Interaction Studies

The 6xHis-SUMO tagged bovine resistin works well in pull-down experiments designed to find possible binding partners or receptors that connect with resistin in bovine biological systems. The His-tag allows for straightforward attachment to nickel-affinity matrices, which can then capture interacting proteins from bovine tissue samples or cell preparations. This method might help researchers figure out resistin signaling pathways that are unique to bovine physiology when working in controlled laboratory conditions.

3. Comparative Species Analysis

Bovine resistin offers researchers a useful resource for comparative studies that examine how resistin structure and function differ across various mammalian species. Scientists can run parallel biochemical tests comparing bovine resistin against human, mouse, or other species versions to better understand what stays the same through evolution and what changes between species. Using the same expression system and purification methods creates more reliable

conditions for these comparative experiments.

4. Biochemical Characterization and Structural Studies

The purified recombinant protein appears suitable for thorough biochemical analysis, including figuring out how the proteins cluster together, their heat stability, and how pH changes affect bovine resistin. If researchers need the native protein structure for physical studies, they can remove the SUMO tag using SUMO protease treatment. These investigations could provide basic knowledge about bovine resistin characteristics that would be valuable for agricultural and veterinary research.

5. In Vitro Assay Development

This recombinant bovine resistin functions as a reference standard for creating and testing quantitative methods specific to bovine samples. The reliable purity and known concentration make it possible to establish standard curves for resistin measurement techniques. Researchers can use this protein to fine-tune testing conditions and confirm detection methods when studying resistin amounts in bovine biological specimens.

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.