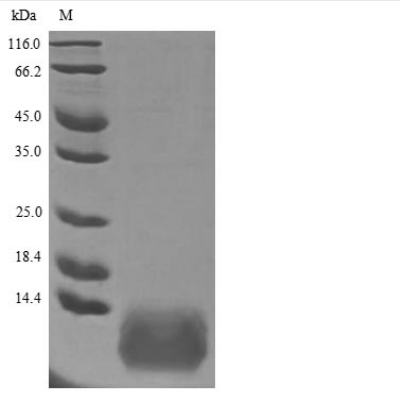
Recombinant Human Trefoil factor 3 (TFF3),partial

Product Code	CSB-YP023433HU
Abbreviation	Recombinant Human TFF3 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.	Q07654
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	LLSSSSAEEYVGLSANQCAVPAKDRVDCGYPHVTPKECNNRGCCFDSRIPGV
Research Area	Signal Transduction
Source	Yeast
Target Names	TFF3
Expression Region	29-80aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	7.5 kDa
Protein Length	Partial

Image



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

Description

Recombinant Human Trefoil factor 3 (TFF3) is produced using a yeast expression system and provided as a partial protein covering the 29-80 amino acid region. The protein includes an N-terminal 6xHis-tag, which streamlines purification and detection processes. This product achieves purity greater than

90% as confirmed by SDS-PAGE analysis, suggesting reliable performance for research applications.

Trefoil factor 3 (TFF3) belongs to the trefoil factor family and appears to play a crucial role in mucosal protection and repair. It primarily maintains the integrity of epithelial surfaces. Researchers study TFF3 for its potential involvement in wound healing and mucosal defense, making it an important focus in gastrointestinal research and epithelial biology.

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 TFF3 protein fragment may serve as an immunogen for generating specific antibodies against human TFF3 or as a standard for validating existing TFF3 antibodies. The N-terminal His-tag streamlines purification and immobilization for ELISA-based antibody screening and characterization assays. High purity (>90%) likely ensures reliable and reproducible results in antibody development workflows. The yeast expression system appears to provide proper eukaryotic protein folding while potentially avoiding cross-reactivity issues that might arise from bacterial expression systems.

2. Protein-Protein Interaction Studies

Researchers can use the His-tagged TFF3 fragment in pull-down assays to identify and characterize potential binding partners or interacting proteins in cell lysates or purified protein preparations. The tag allows efficient immobilization on nickel-based affinity matrices for capturing interacting molecules. This approach could help clarify TFF3's molecular mechanisms and identify novel regulatory pathways. The partial protein sequence (amino acids 29-80) represents a specific domain that may retain important binding sites for interaction studies.

3. Structural and Biochemical Characterization

This recombinant protein fragment can be employed for biophysical studies to investigate the structural properties of the TFF3 domain spanning amino acids 29-80. High purity makes it suitable for techniques such as circular dichroism spectroscopy, dynamic light scattering, or NMR studies to analyze secondary structure and folding characteristics. The His-tag streamlines protein purification and concentration for structural studies. These analyses could provide insights into the structural basis of TFF3 function and stability.

4. ELISA Standard and Quantification Assays

	The purified His-tagged TFF3 fragment can serve as a reference standard in enzyme-linked immunosorbent assays for quantifying TFF3 levels in biological samples or cell culture supernatants. Defined protein concentration and high purity enable the generation of reliable standard curves for quantitative measurements. The recombinant nature appears to ensure consistent batch-to-batch reproducibility compared to native protein preparations. This application is particularly valuable for researchers studying TFF3 expression patterns or regulation in various experimental conditions.
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.