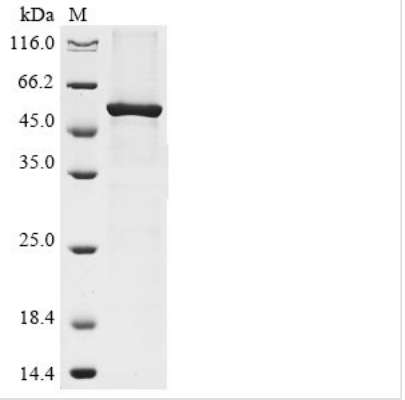
Recombinant Human Aminopeptidase N (ANPEP), partial

Product Code	CSB-EP001827HU1
Abbreviation	Recombinant Human ANPEP 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.	P15144
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	SQEKNKNANSSPVASTTPSASATTNPASATTLDQSKAWNRYRLPNTLKPDSY RVTLRPYLTPNDRGLYVFKGSSTVRFTCKEATDVIIIHSKKLNYTLSQGHRVVLR GVGGSQPPDIDKTELVEPTEYLVVHLKGSLVKDSQYEMDSEFEGELADDLAGF YRSEYMEGNVRKVVATTQMQAADARK
Research Area	Immunology
Source	E.coli
Target Names	ANPEP
Expression Region	34-219aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-GST-tagged and C-terminal Myc-tagged
Mol. Weight	55.8 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Human Aminopeptidase N (ANPEP) is produced in E. coli with an expression region spanning amino acids 34 to 219. This partial protein carries an N-terminal 10xHis-GST tag and a C-terminal Myc tag, which help with purification and detection. The purity exceeds 85%, as verified by SDS-PAGE analysis, ensuring reliable performance in research applications.

Aminopeptidase N (ANPEP) is an enzyme that appears to play a significant role in peptide substrate metabolism. It cleaves amino acids from the N-terminus of peptide chains—a process that seems important for protein maturation and recycling. ANPEP also participates in various cellular pathways, making it a valuable research target for studying enzymatic function and regulation.

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 ANPEP fragment (34-219aa) can work as an immunogen or antigen for developing antibodies against human aminopeptidase N. The dual-tagged protein offers multiple detection and purification strategies during antibody screening. Researchers may use this protein in ELISA-based assays to validate antibody specificity and determine binding affinities. The 85% purity level is likely sufficient for immunization protocols and subsequent antibody characterization experiments.

2. Protein-Protein Interaction Studies

The His-GST tag system allows for efficient pull-down assays to identify potential binding partners of the ANPEP extracellular domain. Researchers can immobilize the GST tag on glutathione-sepharose beads to capture interacting proteins from cell lysates or protein libraries. The Myc tag provides an additional detection method for confirming protein presence and integrity during interaction studies. This partial ANPEP construct represents the extracellular region that

would be accessible for physiological protein interactions.

3. Structural and Biochemical Characterization

The recombinant protein can be used for basic biochemical analyses. These might include size exclusion chromatography, dynamic light scattering, and thermal stability studies to understand the folding and stability properties of this ANPEP domain. The dual tagging system helps with protein purification and detection during various analytical procedures. Researchers can investigate the biophysical properties of this specific ANPEP region (amino acids 34-219) and compare them with other aminopeptidase family members.

4. Tag-Based Detection System Development

The combination of His, GST, and Myc tags makes this protein valuable for developing and optimizing multi-tag detection systems and purification protocols. Researchers can use this protein as a positive control in Western blotting, immunoprecipitation, and affinity purification experiments. The protein serves as a useful standard for testing the specificity and sensitivity of anti-His, anti-GST, and anti-Myc antibodies across different experimental conditions.

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.