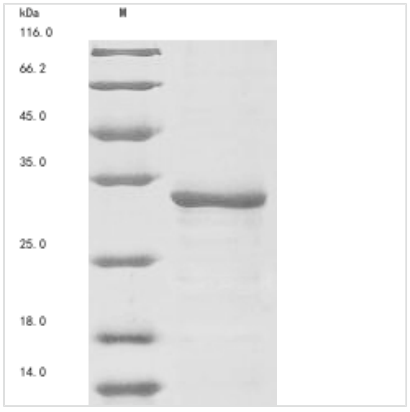
Recombinant Mouse Tripeptidyl-peptidase 2 (Tpp2), partial

Product Code	CSB-BP723744MO
Abbreviation	Recombinant Mouse Tpp2 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.	Q64514
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 Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	DTGVDPGAPGMQVTTDGKPKIIDIIDTTGSGDVNTATEVEPKDGEIIGLSGRVLK IPANWTNPLGKYHIGIKNGYDFYPKALKERIQKERKEKIWDPIHRVALAEACRK QEEFDIANNGSSQANKLIKEELQSQVELLNSFEKKYSDPGPVYDCLVWHDGET WRACVDSNENGDLSKCAVLRNYKEAQEYSSFGTAEMLNYSVNIYDDGNLLSIV TSGGAH
Research Area	Others
Source	Baculovirus
Target Names	Tpp2
Protein Names	Recommended name: Tripeptidyl-peptidase 2 Short name= TPP-2 EC= 3.4.14.10Alternative name(s): Tripeptidyl aminopeptidase Tripeptidyl-peptidase II Short name= TPP-II
Expression Region	44-264aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	28.3 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Mouse Tripeptidyl-peptidase 2 (Tpp2) is produced using a baculovirus expression system and includes amino acids 44 to 264. This partial protein carries an N-terminal 10xHis-tag and a C-terminal Myc-tag, which makes purification and detection more straightforward. SDS-PAGE analysis shows the protein purity exceeds 85%, indicating it should work well as a research reagent.

Tripeptidyl-peptidase 2 (Tpp2) appears to be a key protease that breaks down oligopeptides inside cells. The protein likely plays an important role in protein turnover and seems to be involved in various cellular processes, including immune response regulation. As part of the proteasome-associated complex, Tpp2 may be crucial for maintaining cellular protein balance, which makes it particularly interesting for researchers studying cell biology and immunology.

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. Protein-Protein Interaction Studies

This dual-tagged mouse Tpp2 fragment (amino acids 44-264) could work in pull-down experiments to find potential binding partners or other interacting proteins. The N-terminal His-tag allows researchers to attach it to nickel-affinity resins, and the C-terminal Myc-tag helps detect and confirm the bait protein when studying complex formation. This partial construct might still contain important interaction domains that could be mapped by testing it against cellular lysates or purified protein collections.

2. Antibody Development and Validation

Researchers could use the recombinant Tpp2 fragment as an immunogen or screening antigen when developing antibodies specific to mouse Tpp2. The dual tagging system creates built-in positive controls for immunoassays - anti-His or anti-Myc antibodies can check protein integrity and loading. This partial construct may display epitopes that antibodies can access easily while avoiding

potential problems with full-length protein folding or stability issues.

3. Structural and Biochemical Characterization

The specific 44-264aa region of mouse Tpp2 is suitable for analysis using biophysical methods like circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation to study its folding properties and how it forms complexes with itself. The high purity (over 85%) and dual tags make protein quantification and handling easier for structural work. This fragment might represent a stable domain or functional unit that could reveal details about how the complete enzyme is organized.

4. Tag-Based Detection Assays

The combination of His and Myc tags opens up possibilities for creating sandwich-type detection assays or ELISA-based methods for research purposes. Anti-His antibodies could capture the protein while anti-Myc antibodies handle detection, or researchers could switch these roles depending on what works better for their specific setup. This strategy might prove useful for tracking protein stability, developing purification methods, or creating quantitative approaches for other Tpp2-related studies.

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.