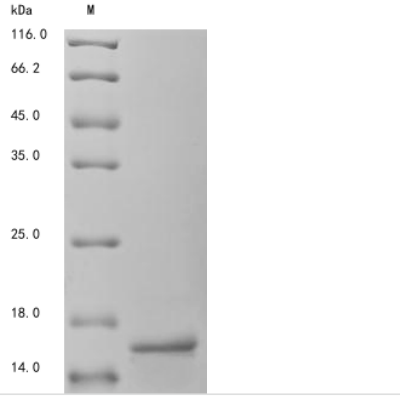
Recombinant Mouse Transthyretin (Ttr), partial

Product Code	CSB-YP025270MO1
Abbreviation	Recombinant Mouse Ttr 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.	P07309
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 90% as determined by SDS-PAGE.
Sequence	AGAGESKCPLMVKVLDAVRGSPAVDVAVKVFKKTSEGSWEPFASGKTAESGE LHGLTTDEKFVEGVYRVELDTKSYWKTLGISPFHEFADVVFTANDSGHRHYTIA ALLSPYSYSTTAVVSNPQN
Research Area	Cardiovascular
Source	Yeast
Target Names	Ttr
Expression Region	23-147aa
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	15.5 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Mouse Transthyretin (Ttr) is produced through a yeast expression system and covers amino acids 23 to 147. This partial-length protein comes with an N-terminal 6xHis-tag, which makes purification more straightforward. The product shows purity levels above 90%, as determined by SDS-PAGE analysis. It's designed strictly for research purposes and shouldn't be used in clinical or diagnostic settings.

Transthyretin functions as a transport protein, mainly carrying thyroid hormones and retinol-binding protein-bound retinol through the bloodstream. The protein appears to play an important role in keeping thyroid hormones and vitamin A levels balanced. Given its involvement in these vital processes, transthyretin has become a key focus in biomedical research—especially when scientists want to understand how it's structured and what it does.

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. In Vitro Protein-Protein Interaction Studies

Scientists can use this recombinant mouse transthyretin to study how TTR interacts with other proteins in controlled lab conditions. The N-terminal 6xHis tag makes it easier to purify and attach the protein for pull-down assays or surface plasmon resonance experiments. Researchers might examine which proteins bind to TTR, measure how fast these interactions happen, and figure out which parts of the protein are involved in binding. The high purity (>90%) should give reliable results in biochemical binding tests.

2. Antibody Development and Validation

This recombinant mouse TTR works well as an antigen when creating and testing antibodies that target mouse transthyretin specifically. The 6xHis tag helps with protein purification and makes it simpler to attach the protein to different surfaces for immunization or ELISA-based screening. Scientists can test how specific their antibodies are, measure binding strength, and validate antibodies they plan to use in mouse research. Since the expression region (23-147aa) is clearly defined, it provides a reliable target for consistent antibody testing.

3. Structural and Biophysical Characterization

This purified protein opens up possibilities for detailed structural studies of mouse transthyretin using methods like X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy. The high purity level may support various biophysical analyses—thermal stability tests, circular dichroism spectroscopy, and dynamic light scattering experiments. Scientists can look into

how the protein folds, how stable it is, and whether it changes shape under different buffer conditions. The yeast expression system might even add post-translational modifications that could be relevant for structural work.

4. Comparative Species Analysis

Having mouse-specific recombinant TTR allows researchers to directly compare it with transthyretin proteins from other species in evolutionary and functional studies. They can run biochemical assays side-by-side to spot species-specific differences in protein behavior, stability, or binding patterns. The standardized expression region (23-147aa) creates a consistent basis for comparing across species. This approach seems particularly useful for understanding how TTR function varies between species and for checking whether mouse models accurately represent what happens in research.

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.