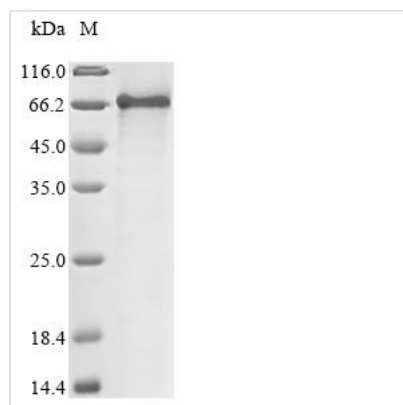




# Recombinant Bovine albumin (ALB)

<b>Product Code</b>	CSB-YP001561BO
<b>Storage</b>	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.
<b>Uniprot No.</b>	P02769
<b>Form</b>	Liquid or Lyophilized powder
<b>Storage Buffer</b>	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.
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Bos taurus (Bovine)
<b>Purity</b>	Greater than 85% as determined by SDS-PAGE.
<b>Sequence</b>	DTHKSEIAHRFKDLGEEHFKGLVLIAFSQYLQQCPFDEHVKLVNELTEFAKTCV ADESHAGCEKSLHTLFGDELCKVASLRETYGDMADCCEKQEPERNECFLSHK DDSPDLPKLKPDPNTLCDEFKADEKKFWGKYLEIARRHPYFYAPELLYYANK YNGVVFQECQAEDKGACLLPKIETMREKVLASSARQRLRCASIQKFGERALKA WSVARLSQKFPKAEFVEVTKLVTDLTQVHKECCHGDLLECADDRADLAKYICD NQDTISSKLKECCDKPLLEKSHCIAEVEKDAIPENLPPLTADFAEDKDVCKNYQ EAKDAFLGSFLYEYSRRHPEYAVSVLLRLAKEYEATLEECCAADDPHACYSTV FDKLKHLVDPEQNLIKQNCQDFEKLGEYGFQNALIVRYTRKVPQVSTPTLVEVS RSLGKVGTRCCTKPESERMPCTEDYLSLILNRLCVLHEKTPVSEKVTKCCTES LVNRRPCFSALTPDETYVPKAFDEKLFTHADICTLPDTEKQIKKQTALVELLKH KPKATEEQKTKVMENFVAFVDKCCAADDKEACFAVEGPKLVVSTQTALA
<b>Lead Time</b>	3-7 business days
<b>Research Area</b>	Cardiovascular
<b>Source</b>	Yeast
<b>Gene Names</b>	ALB
<b>Expression Region</b>	25-607aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	C-terminal 6xHis-Myc-tagged
<b>Mol. Weight</b>	70.1 kDa
<b>Protein Description</b>	Full Length of Mature Protein
<b>Image</b>	



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

## Description

The process of synthesizing the recombinant bovine ALB protein includes transfecting yeast cells with a DNA expression vector containing the gene for the ALB protein. Subsequently, the cells are cultured to induce the expression of the intended protein. The recombinant bovine ALB protein is then collected and purified from the cell lysate through affinity purification. It exhibits a purity exceeding 85%, as verified by SDS-PAGE.

Albumin, a crucial protein in the human body, plays various essential roles due to its unique properties [2]. It acts as a physiological buffer, maintaining colloid oncotic pressure in healthy individuals [1]. Human serum albumin (HSA), the most abundant protein in blood circulation, exhibits extraordinary ligand binding capacity, making it a transporter for a wide range of substances [3][4]. Albumin is involved in critical processes such as endocytosis, which is particularly relevant in neurons [5].

Albumin interacts with various molecules and undergoes modifications, as observed in the increased clearance of glycated albumin by proximal tubule cells [6]. The evolution of albumin can be traced back to early vertebrates, indicating its fundamental presence in mammalian plasma [7]. The production of serum albumin increases significantly after birth, becoming the predominant protein in adult serum [8].

### References:

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- [2] R. García-Martínez, P. Caraceni, M. Bernardi, P. Ginès, V. Arroyo, & R. Jalan, Albumin: pathophysiologic basis of its role in the treatment of cirrhosis and its complications, *Hepatology*, vol. 58, no. 5, p. 1836-1846, 2013.  
<https://doi.org/10.1002/hep.26338>
- [3] K. Neelofar, Z. Arif, J. Ahmad, & K. Alam, Non-enzymatic glucosylation induced neo-epitopes on human serum albumin: a concentration based study, *Plos One*, vol. 12, no. 2, p. e0172074, 2017.  
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- [8] L. Jagodzinski, T. Sargent, M. Yang, C. Glackin, & J. Bonner, Sequence homology between rnas encoding rat alpha-fetoprotein and rat serum albumin., *Proceedings of the National Academy of Sciences*, vol. 78, no. 6, p. 3521-3525, 1981. <https://doi.org/10.1073/pnas.78.6.3521>

## 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?/-80?. Our default final concentration of glycerol is 50%. Customers could use it as reference.