

## Serum Albumin/ALB Protein, Cynomolgus (P.pastoris, His)

<b>Cat. No.:</b>	HY-P71711
<b>Synonyms:</b>	ALB; Qlv-U347A-C12; Qlv-U377A-G8Serum albumin
<b>Species:</b>	Cynomolgus
<b>Source:</b>	P. pastoris
<b>Accession:</b>	A2V9Z4 (25D-608A)
<b>Gene ID:</b>	102130757
<b>Molecular Weight:</b>	Approximately 68.0 kDa

### PROPERTIES

#### AA Sequence

D T H K S E V A H R	F K D L G E E H F K	G L V L V A F S Q Y	L Q Q C P F E E H V
K L V N E V T E F A	K T C V A D E S A E	N C D K S L H T L F	G D K L C T V A T L
R E T Y G E M A D C	C A K Q E P E R N E	C F L Q H K D D N P	N L P P L V R P E V
D V M C T A F H D N	E A T F L K K Y L Y	E V A R R H P Y F Y	A P E L L F F A A R
Y K A A F A E C C Q	A A D K A A C L L P	K L D E L R D E G K	A S S A K Q R L K C
A S L Q K F G D R A	F K A W A V A R L S	Q K F P K A E F A E	V S K L V T D L T K
V H T E C C H G D L	L E C A D D R A D L	A K Y M C E N Q D S	I S S K L K E C C D
K P L L E K S H C L	A E V E N D E M P A	D L P S L A A D Y V	E S K D V C K N Y A
E A K D V F L G M F	L Y E Y A R R H P D	Y S V M L L L R L A	K A Y E A T L E K C
C A A A D P H E C Y	A K V F D E F Q P L	V E E P Q N L V K Q	N C E L F E Q L G E
Y K F Q N A L L V R	Y T K K V P Q V S T	P T L V E V S R N L	G K V G A K C C K L
P E A K R M P C A E	D Y L S V V L N R L	C V L H E K T P V S	E K V T K C C T E S
L V N R R P C F S A	L E L D E A Y V P K	A F N A E T F T F H	A D M C T L S E K E
K Q V K K Q T A L V	E L V K H K P K A T	K E Q L K G V M D N	F A A F V E K C C K
A D D K E A C F A E	E G P K F V A A S Q	A A L A	

**Appearance** Lyophilized powder.

**Formulation** Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.

**Endotoxin Level** <1 EU/μg, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH<sub>2</sub>O.

**Storage & Stability** Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping** Room temperature in continental US; may vary elsewhere.

## DESCRIPTION

### Background

Serum Albumin (ALB) protein serves various roles, including binding water, calcium, sodium, potassium, fatty acids, hormones, bilirubin, and drugs. Its primary function involves regulating the colloidal osmotic pressure of blood. ALB acts as a major transporter of zinc in plasma, binding approximately 80% of all plasma zinc. It also serves as a significant transporter for calcium and magnesium, binding approximately 45% of circulating calcium and magnesium in plasma. ALB potentially possesses multiple calcium-binding sites and may additionally bind calcium in a non-specific manner. The presence of a shared binding site between zinc and calcium at residue Asp-273 suggests a potential interaction and communication between zinc and calcium transport in the blood, with zinc exhibiting higher affinity followed by calcium and magnesium. ALB also interacts with bacterial siderophore enterobactin, impeding enterobactin-mediated iron uptake by *E.coli* from ferric transferrin and thereby limiting the utilization of iron and the growth of enteric bacteria like *E.coli*. However, it does not hinder iron uptake by the bacterial siderophore aerobactin. ALB interacts with FCGRT to regulate its homeostasis and also interacts with TASOR. In plasma, ALB forms a covalently-linked complex with chromophore-bound alpha-1-microglobulin, yet this interaction does not hinder the binding of fatty acids to ALB.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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