

## Serum Albumin/ALB Protein, Human (HEK293, His-Avi)

Cat. No.:	HY-P78393
Synonyms:	Albumin; ALB; Serum albumin; ANALBA; FDAH; PRO0883; PRO0903; PRO1341
Species:	Human
Source:	HEK293
Accession:	P02768 (D25-L609)
Gene ID:	213
Molecular Weight:	69-70 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 $\mu$ m filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/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	<p>The Serum Albumin/ALB protein serves a multifaceted role by binding to water, Ca(2+), Na(+), K(+), fatty acids, hormones, bilirubin, and drugs, indicative of its versatile binding capabilities. Its primary function likely revolves around the regulation of the colloidal osmotic pressure of blood, emphasizing its pivotal role in maintaining blood homeostasis. Notably, ALB acts as a major transporter for zinc, binding approximately 80% of all plasma zinc, and also serves as a significant transporter for calcium and magnesium, binding about 45% of circulating calcium and magnesium in plasma. The presence of potential calcium-binding sites suggests its involvement in calcium transport, with a distinct affinity rank order of zinc &gt; calcium &gt; magnesium. Additionally, ALB exhibits a special interaction with the bacterial siderophore enterobactin, inhibiting enterobactin-mediated iron uptake of <i>E. coli</i> and potentially limiting the utilization of iron by enteric bacteria. Furthermore, ALB engages in interactions with FCGRT, regulating its homeostasis, and forms a covalently-linked complex with chromophore-bound alpha-1-microglobulin in plasma, highlighting its diverse roles in molecular interactions and maintaining its functionality in fatty acid binding.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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