

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

Cat. No.:	HY-P78077
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

AA Sequence

DAHKSEVAHR	FKDLGEEENFK	ALVLI AFAQY	LQQCPFEDHV
KLVNEVTEFA	KTCVADESAE	NCDKSLHTLF	GDKLCTVATL
RETYGEMADC	CAKQEPERNE	CFLQHKDDNP	NLPRLV RPEV
DVMCTAFHDN	EETFLKKYLY	EIARRHPYFY	APELLFFAKR
YKAAFTTECCQ	AADKAACLLP	KLDEL RDEGK	ASSAKQRLKC
ASLQKFGERA	FKAWAVARLS	QRFPKAEFAE	VSKLVTDLTK
VHTECCHGDL	LECADDRADL	AKYICENQDS	ISSKLKECCE
KPLLEKSHCI	AEVENDEMPA	DLPSLAADFV	ESKDVCKNYA
EAKDVFLGMF	LYEYARRHPD	YSVVLLRLA	KTYETTLEKC
CAAADPHECY	AKVFDEFKPL	VEEPQNLIKQ	NCELFELQGE
YKFQNAL LVR	YTKKVPQVST	PTLVEVSRNL	GKVGSKCCKH
PEAKRMPCAE	DYLSVVLNQL	CVLHEKTPVS	DRVTKCCTES
LVNRRPCFSA	LEVDETYVPK	EFNAETFTFH	ADICTLSEKE
RQIKKQTALV	ELVKHKPKAT	KEQLKAVMDD	FAAFVEKCKK
ADDKETCF AE	EGKKLVAASQ	AALGL	

Biological Activity Biotinylated Human Serum Albumin, His-Avi Tag immobilized on CM5 Chip can bind Human FcRn, His Tag with an affinity constant of 1.84 μM as determined in SPR assay (Biacore T200).

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.

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

Reconstitution It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH₂O.

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**

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 > calcium > magnesium. Additionally, ALB exhibits a special interaction with the bacterial siderophore enterobactin, inhibiting enterobactin-mediated iron uptake of *E. coli* 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.

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

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