Serum albumin often referred to simply as blood albumin, is an albumin (a type of globular protein) found in vertebrate blood. Human serum albumin is encoded by the ALB gene.

Other mammalian forms, such as bovine serum albumin, are chemically similar.

Serum albumin is produced by the liver, occurs dissolved in blood plasma, and is the most abundant blood protein in mammals. Albumin is essential for maintaining the oncotic pressure needed for proper distribution of body fluids between blood vessels and body tissues; without albumin, the high pressure in the blood vessels would force more fluids out into the tissues. It also acts as a plasma carrier by non-specifically binding several hydrophobic steroid hormones and as a transport protein for hemin and fatty acids. Too much or too little circulating serum albumin may be harmful. Albumin in the urine usually denotes the presence of kidney disease. Occasionally albumin appears in the urine of normal persons following long periods of standing (postural albuminuria).

The reference range for albumin concentrations in serum is approximately 35 - 50 g/L (3.5 - 5.0 g/dL).

Serum albumin level is associated with prognosis in glioblastoma patients, although the underlying mechanism is complex because of the role of serum albumin as a nutritional indicator and its involvement in inflammatory responses [1)].

Patients with presurgical serum albumin levels below 3.4 mg/dL survived an average (median) of 62 days (95% confidence interval (CI): 34, 135 days) after surgery. Those with serum albumin levels of at least 3.4 mg/dL survived an average of 494 days (95% CI: 241, 624 days). The association between serum albumin level and time until death persists when adjusted for demographic and treatment variables using Cox proportional hazards regression. Adjusted hazard ratios, by quartile of presurgical serum albumin level, are: 1.0, 1.2, 0.1, 0.1 (P-value for trend test = 0.007). In addition to providing a prognostic indicator, presurgical serum albumin levels can be used to evaluate the success of randomization of clinical trials for glioblastoma multiforme therapies. The findings are consistent with results seen for tumors at other sites. We speculate that our results may be attributable to an association between low serum albumin levels and physiological events associated with angiogenesis [2)].

1)
Han S, Huang Y, Li Z, Hou H, Wu A. The prognostic role of preoperative serum albumin levels in glioblastoma patients. BMC Cancer. 2015 Mar 8;15(1):108. PubMed PMID: 25880463.
2)
Schwartzbaum JA, Lal P, Evanoff W, Mamrak S, Yates A, Barnett GH, Goodman J, Fisher JL. Presurgical serum albumin levels predict survival time from glioblastoma multiforme. J Neurooncol. 1999 May;43(1):35-41. PubMed PMID: 10448869.