

Product Information

Albumin, human recombinant, expressed in rice

Catalog Number **A9731**

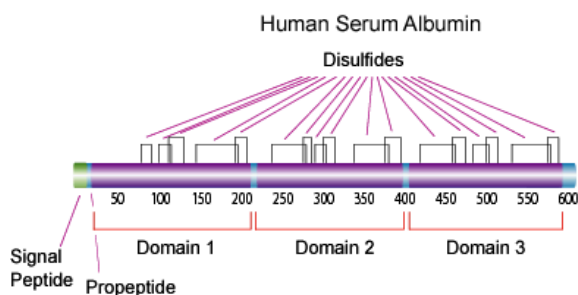
Storage Temperature 2–8 °C

CAS RN 70024-90-7

Synonyms: HSA; rHSA; Cellastim™

Product Description

Albumins are a group of simple proteins found in the body fluids and tissues of animals, and in some plant seeds. Unlike globulins, albumins have low molecular masses, are soluble in water and easily crystallized, and contain an excess of acidic amino acids. It is a single polypeptide chain with one free sulfhydryl group (Cys³⁴) and 17 intrachain disulfide bonds.



Albumin accounts for 55–62% of the protein present in serum and plasma. Although albumin does not undergo post-translational glycosylation, it can become glycosylated during circulation in plasma, particularly in diabetic individuals. Due to its high charge to mass ratio, albumin binds water, Ca²⁺, Na⁺, K⁺, fatty acids, bilirubin, hormones, and drugs. The main biological function of albumin is to regulate the colloidal osmotic pressure of blood.¹

Human and bovine albumins contain 16% nitrogen and are often used as standards in protein calibration studies. Due to their free hydrophobic region, fatty acid depleted albumins are used to solubilize lipids in tissue culture applications, and are also used as blocking agents in Western blots or ELISA applications. Globulin free albumins are suitable for use in applications where no other proteins should be present (e.g., electrophoresis).²

This is a completely animal-free product derived from a plant-based expression system and has been shown to be suitable as a cell culture supplement. It is supplied as a lyophilized powder containing sodium phosphate and sodium chloride, pH 7.0.

Absorbance:² 0.531 (A_{279 nm}, 1 mg/ml)

Molecular mass:³ ~67 kDa

pI:³ 5.3

Purity:³ ≥96 % (Total Albumin Content)

SDS-PAGE and mass spectral analysis indicate the presence of albumin fragments primarily at ~55 and 44 kDa.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the product at 2–8 °C. Aqueous aliquots stored at –20 °C will not degrade for several months. Repeated freezing and thawing of solutions is not recommended.

References

1. Scott, T., and Eagleson, M., *Concise Encyclopedia: Biochemistry*, 2nd edition, Walter de Gruyter (New York, NY: 1988) pp. 19-20.
2. *The Plasma Proteins*, 2nd edition, Vol. I, Putnam, F.W., ed., Academic Press (New York, NY: 1975) pp. 133-181.
3. InVitria data

Cellastim is a trademark of InVitria.

RBG,CMS,MAM 11/09-1

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