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ProductInformation

Albumin
from sheep serum

Product Number **A 3264**
Storage Temperature 2-8 °C

Product Description

CAS Number: 9048-46-8
λ_{max}: 405 nm
Extinction coefficient: $E^{1\%}$ = <1.5 (water, 405 nm)

Albumins are a group of simple proteins found in the body fluids and tissues of animals and in some plant seeds. Serum and plasma albumin is carbohydrate-free and comprises 55-62% of the protein present. Due to its high charge to mass ratio, albumin binds water, Ca^{2+}, Na^{+}, K^{+}, fatty acids, bilirubin, hormones, and drugs. The main biological function of albumin is to regulate the colloidal osmotic pressure of blood.

Fatty acid free albumins are used to solubilize lipids in tissue culture and are also used as blocking agents in Western blots or ELISA applications since they contain a free hydrophobic region. Globulin free albumins are suitable for use in applications where no other proteins should be present (electrophoresis).[3]

In addition, albumins are also used as a stabilizing agent for enzyme and peptide solutions. A typical concentration used for stabilization is 0.1-0.5% (w/v). Albumin is often used as a standard for the determination of protein concentrations by Bradford and bicinchoninic (BCA) assays. In addition, albumin has been used as a protein base filler for the production of powder-filled products, a nutrient supplement for microbial medium, and a growth promoter in serum-free media. Albumin is also used in molecular biology applications, both as a blocking agent in Southern hybridizations and as a restriction enzyme diluent.

This product is prepared by fractionation using an initial cold alcohol precipitation.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (40 mg/ml).

References

1. Laggner, P., et al., X-ray small-angle scattering on soluble antigen-antibody complexes. FEBS Lett., **15(3)**, 220-224 (1971).
2. CRC Practical Handbook of Biochemistry and Molecular Biology, Fasman, G. D., CRC Press (Boca Raton, FL: 1989), p. 200.
3. Antibodies: A Laboratory Manual, Harlow, E. and Lane, D., eds., Cold Spring Harbor Laboratory (Cold Spring Harbor, NY: 1988) pp.178, 496.

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