

Human Serum Albumin

CAT N°: SPH-146-1KG

Colour: pale yellow to greenish flakes

Purity: > 92%

Virus testing: Source material was tested and found negative for Hepatitis B (HBS), Hepatitis C (HCV) and HIV Type 1 and 2 (HIV 1/2)

pH: 6.5 – 7.4

Storage conditions: Store dry powder at -20°C

Shelf life: 36 months

Description:

Human serum albumin is the most abundant protein in human blood plasma. Albumin constitutes about half of the blood serum protein.

It is commonly used in cell culture protocols, particularly where protein supplementation is necessary and the other components of serum are unwanted. In cell culture its main role is as a carrier of small molecules. Because of its negative charge, HSA binds water, salts, fatty acids, vitamins and hormones, then carries these bound components between tissues and cells. The binding capacity also makes HSA an effective scavenger to remove toxic substances, including pyrogens, from the medium.

Albumins are readily soluble in water and can only be precipitated by high concentrations of neutral salts such as ammonium sulphate. The solution stability of HSA is very good (especially if the solutions are stored as frozen aliquots). In fact, albumins are frequently used as stabilizers for other solubilised proteins (e.g., labile enzymes). However, albumin is readily coagulated by heat. When heated to 50°C or above, albumin quite rapidly forms hydrophobic aggregates which do not revert to monomers upon cooling. At somewhat lower temperatures aggregation is also expected to occur, but at relatively slower rates.

Human and bovine albumins contain 16% nitrogen and are often used as standards in protein calibration studies.

Albumin is used to solubilise lipids, and is also used as a blocking agent in Western blots or ELISA applications.

Recommended use:

- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store the product in a dry area
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall...)
- Protect the product from any form of humidity
- Use, in one time, after opening, the entire quantity of product of the container. If it is not possible, close the container immediately after sampling the quantity of powder required.

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

Indications of deterioration:

Lyophilized powder should be free flowing. Do not use if powder caked. Prepared solution should be clear of particulate and flocculent material. Other evidence of deterioration may include colour change or degradation of physical performance characteristics.