

## Albumins for Cell Culture

Serum is a highly complex mixture of various compounds which can influence growth, e.g. growth factors, attachment factors, heavy metal and fatty acid binding proteins, mineral salts, hormones etc. but also toxic compounds. The composition of this mixture may vary from batch to batch and has to be tested for each cell line.

In recent years, the development of serum-reduced or serum-free media has become more and more important by the addition of exactly defined ingredients which are essential for growth. It is a great advantage of serum-free media that the isolation and purification of cellular regulation factors, monoclonal antibodies and recombinant proteins are made significantly easier. Studies on the mechanism of hormones and drugs can be conducted much easier in the absence of serum than in the presence of an undefined mixture.

### Serum albumin fulfills several important functions:

- It acts as a carrier for nutrients such as amino acids, water-insoluble fatty acids, hormones, and trace elements
- It binds toxic compounds
- It protects cells against mechanical damage from shearing forces in agitated culture systems

The requirements for albumins may vary depending on the cells cultured and the particular problem involved.

For many applications, in basic research as well as in production processes, albumins with a low endotoxin level have become increasingly important, especially as many cells are sensitive to endotoxins. Infectious agents also have to be considered when working with products from animal or human sources.

All our bovine albumins originate from the USA, a country where BSE (*Bovine Spongiform Encephalopathy*) has not occurred in recent years. They are derived from animals that underwent ante- and post-mortem health inspection in an abattoir licensed by the United States Department of Agriculture and were designated free from infectious and contagious diseases.

During isolation, the albumins were heat-treated for 10 h at 60 °C, a procedure which has been shown to inactivate endogenous viruses known to contaminate blood.

Each batch of bovine serum albumin is tested for the absence of mycoplasma and 7 bovine viruses. An appropriate health certificate can be obtained upon request. The donor blood from which the human serum albumin is manufactured, has been tested for the presence of HbsAg and HIV antibody and found to be non-reactive by certified test procedures.

| Albumins for Cell Culture  | Cat.No. |
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| <b>Albumin bovine</b> cell culture grade                                       | 47330   |
| <b>Albumin bovine Cohn Fraction V, pH 7.0</b>                                  | 11931   |
| <b>Albumin bovine Fraction V, pH 7.0</b> standard grade, lyophil.              | 11930   |
| <b>Albumin bovine Fraction V, pH 5.2</b> standard grade, lyophil.              | 11922   |
| <b>Albumin bovine Fraction V, Very Low Endotoxin, Fatty Acid-Free</b> lyophil. | 47299   |
| <b>Albumin bovine Fraction V, Very Low Endotoxin</b> lyophil.                  | 47324   |
| <b>Albumin bovine Low Endotoxin</b> biotechnology grade                        | 47321   |
| <b>Albumin bovine, 30 % solution polymer enhanced</b>                          | 11937   |