Fetal Bovine Serum (Australia Origin)

1. Description

For many applications, Fetal Bovine Serum (FBS) is commonly used as a supplement for growth medium. It functions or provides a vast array of

- Macromolecular Proteins
- Low-Molecular Weight Nutrients as an additional Source of Amino Acids, Carbohydrates and Vitamins
- Carrier Proteins for Water-Insoluble Components
- Raises the Buffering Capacity of the Medium
- Binds and/or Neutralizes Toxic Components
- Reduces Cell Oxidative Stress Decreasing Apoptosis like Insulin and other Growth Factors
- Provides Growth-Promoting Factors Easing Cell Adaptation

This variegated spectrum of often undefined components stimulate and enhance the in-vitro growth of cells with its inclusion of hormones, essential growth and attachment factors and other essential niche requirements for optimal cell performance.

The wide spectrum of macromolecular proteins that constitute Serum are part and parcel of a final complex mixture that segues and culminates into those necessary and indispensable unique niche requirements that stimulates the in vitro growth and development of specific cells in culture. Animal Serum provides not only an additional source of amino acids, carbohydrates and vitamins but also decreases concerns over whether a particular basal medium of choice provides all the aforementioned essential nutrients.

Furthermore, Serum not only acts by binding or neutralizing toxic elements in the growth milieu, but also increases the buffering capacity of the medium itself. Most often, Serum supplemented applications contain just the right quantity and quality of growth-promoting factors to help cells easily adapt from one formulation to another. Choosing the appropriate Serum may prove to be more important than the choice of basal media itself.

Pre-Screened and Pre-tested Serum and Serum Products undergo the most stringent and rigorous Quality Control/Assurance Standards and Protocols testing all raw materials and finished products in order to meet the demands of international markets and ensure high quality and consistency.

2. Specifications

Catalog No.	Item Name	规格
91-02-0003S-AUS	Fetal Bovine Serum	100ml
91-02-0003L-AUS		500ml

3. General Handling Precautions, Storage & Stability

This material, like all other materials utilized in the laboratory setting should be handled only by trained personnel familiar with Laboratory Procedures regarding the Handling, Use, Storage and Disposal of chemical products especially hazardous or potentially hazardous products. FBS is very stable and under normal use by trained individuals is not expected to be toxic, hazardous or dangerous to one's health and safety according to OSHA regulations. Nevertheless, all procedures involving this product must be completed in ways that minimize spattering, splashing, spraying and/or generation of droplets. Do not expose to light for prolonged periods as it is light-sensitive. For prolonged storage, place in the dark under the specified storage conditions stipulated on the label.

Please note that Serum should never be taken from a frozen or refrigerated state and placed in a water bath to expedite the thawing/warming procedure. Such handling compromises the serum quality and may cause the bottle to break. After the serum has reached room temperature, it may be then pre-warmed slowly to 37°C while mixing the contents thoroughly before adding to the medium of choice.

Although all raw materials of Human and Animal products undergo an extensive and rigorous battery of tests to ensure compliance and validation of international protocols regarding safety and health, no test methods offer complete assurance that products derived from all human or animal sources are noninfectious for diseases not tested. Handle all human and animal source material as if it were capable of transmitting infection by using appropriate universal and/or international personal protection equipment as stipulated on the MSDS.

4. Caution

All components containing biological materials must be treated as potentially biohazardous. The product should be handled aseptically and stored in sterile conditions to avoid bacterial

contamination. All materials and mixtures may present unknown hazards and should be used with caution.

5. Instructions/Procedure

1) Take a bottle out of the proper storage conditions at –20°C and read the label.

2) Thaw to room temperature.

3) Ensure that the cap of the bottle is tight.

4) Gently swirl the solution in the bottle.

5) Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.

6) Using aseptic/sterile technique under a laminar-flow culture hood, work according to established protocols.

As the selection of a nutrient medium or supplementation thereof is strongly influenced, among others, by many factors, of note are three major considerations:

- Cell Type
- Type of Culture (e.g., Clonal, Monolayer, Suspension)
- Degree of Chemical Definition

It's recommended to review the extensive literature concerning culture media and its supplementation and the physiological parameters required for each specific cell-line as per their essential requirements.