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Product Information

Fetal Bovine Serum
Australia origin, sterile-filtered
suitable for cell culture, suitable for hybridoma

Product Number **F8318**
Storage Temperature –20 °C

Synonyms: FBS, FCS, sera, serum

Product Description
Animal serum is commonly used to supplement basal media formulations for the optimal growth of many cell types *in vitro*.

Fetal Bovine Serum (FBS) is the most common serum used to supplement cell culture media due to its high nutritional content. Although it is relatively low in protein, FBS is effective in promoting and sustaining growth of vertebrate mammalian and insect cells.

Raw Serum Process
China eligible animal blood is collected at government inspected facilities located within Australia. Whole fetal blood is aseptically collected and allowed to clot under controlled conditions. After centrifugation, the serum is decanted from the clot. The raw serum is then pooled and immediately frozen.

Filtration and Packaging
Frozen raw serum is thawed under controlled conditions and then processed through a series of membrane filters in descending pore size. Pooled FBS is filtered through three 0.1 μm filters. Serum is packaged in sterilized, graduated plastic bottles and sealed with a tamper indicator. Bottles are frozen at –10 to –40 °C.

Traceability
The material used in this product is collected in Australia. The serum is not collected from cattle born, raised, shipped through, or slaughtered in countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. The China eligible material is collected by strict methods from regions south and west of the Blue Tongue Virus (BTV) region of Australia. A Certificate of Analysis indicating the country of origin is available for each lot of serum.

Product Characteristics
Adventitious Viral Agents (AVA) (9CFR 113.53)
Not detected

Electrophoretic Profile
Typical

Endotoxin
≤5.0 EU/mL

Growth Promotion
≥85% of FCS control

Hemoglobin
≤0.18 mg/mL

Mycoplasma (9CFR 113.28)
Not detected

Osmolality
280– 365 mOsm/kg

pH
6.9–7.6

Sterility
Sterile

Total Protein
35–45 mg/mL

Thawing Instructions
Note: Use aseptic technique when handling serum.

1. Remove the serum bottles from the freezer and allow them to acclimate to room temperature for approximately 10 minutes.

2. Place each container in a 30–37 °C water bath or incubator. Excessive temperatures will degrade heat labile nutrients. If using a water bath, prevent the bottle caps from being completely submerged.

3. Gently swirl the bottles every 10–15 minutes until the serum is completely thawed and homogenous. Note: Gentle, periodic agitation is crucial to its optimum performance. If a bottle of serum is not periodically swirled as it thaws, gradients containing high concentrations of salts, proteins, and lipids will form throughout the liquid portion and lead to the formation of crystalline or flocculent precipitates. These cryoprecipitates are not toxic to cell cultures, but they affect the appearance and consistency of each bottle of serum. Small amounts of cryoprecipitates are not uncommon, and will not affect product performance. Gently warming and mixing the serum will generally allow the material to go back into solution.

4. After thawing, use the serum promptly. Liquid serum may be stored refrigerated (2–8 °C) up to four weeks. To avoid thaw/freeze cycles or long periods of refrigeration, it is recommended that any unused serum be immediately dispensed into smaller aliquots and refrozen for future use. Note: Refiltering sterile serum before or after being added to sterile medium is not recommended because the growth promoting capability may be reduced.

Precautions and Disclaimer
For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For stability and optimal performance, serum should be stored at –20 °C and used prior to the labeled expiration date.

To effectively preserve the integrity of animal serum, it should be stored frozen and protected from light. Multiple thaw/freeze cycles should be avoided as they will hasten the degradation of serum nutrients and can result in the formation of insoluble precipitates.

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