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Technical Datasheet

Fetal Bovine Serum

Hybridoma Tested

US origin, Sterile filtered

Product Code: RM10946

Product Description:

Fetal bovine serum (FBS) is a ubiquitously used essential supplement in cell culture media. Hybridoma tested FBS shows superior growth promotion, exceptional clonal growth at limiting dilution, and a lack of cytotoxicity during the growth studies. Seeding efficiency, doubling time, and final cell density are measured on hybridoma cell lines. The serum is screened to identify lots that offer optimal performance with hybridoma cells. Growth studies are carried through two subculture generations and cell growth is plotted as a logarithmic function of time in culture. During the testing period, cultures are examined microscopically for atypical morphology and evidence of cytotoxicity. Mouse myeloma cell line Sp2/0-AG14 are seeded at a very low cell density in microtiter plates and ability of serum to generate colonies from single cells is determined in terms of absolute and relative cloning efficiency. Hybridoma tested serum has been shown to support mouse myeloma cells and hybridoma cells in culture.

RM10946 is filter sterilized Fetal Bovine Serum collected from approved abattoirs in USA. US Origin FBS is considered the world's standard for quality and is one of the most widely used serum in the world. It is ideally suited for culturing hybridoma and myeloma cells.

Directions for Thawing of Serum:

Thawing of the sera should be done as quickly as possible in order to minimize the period of time during which elevated salt concentration prevail in the thawed liquid.

1. Remove the bottles from the freezer and allow them to acclimatize at room temperature for about 10 minutes or overnight in refrigerator.
2. Place the bottles at 37°C in a water bath or incubator. *Note: If placed in water bath ensure that the bottles do not float in water. Avoid exposing serum to elevated temperatures as this can lead to degradation of heat labile nutrients.*
3. Swirl the bottle of serum frequently during thawing to disperse released salts and proteins uniformly in the liquid.
4. Swirl the bottle occasionally while working at room temperature in order to ensure that the liquid remains homogenous.

Note on Cryoprecipitate:

We advise users to follow the recommended thawing procedure. Proper thawing with periodic agitation is crucial to a serum's optimum performance. If bottle of serum is not frequently swirled during thawing, the released proteins and salts tend to form crystalline or flocculent precipitates. These cryoprecipitates are not detrimental to the performance of serum but affect serum's appearance and consistency. Filtering serum to remove cryoprecipitate is not recommended and could result in loss of nutrients. Slight turbidity or small amounts of flocculent material may be observed even if serum is thawed using the recommended procedure.This is normal in most serum products and will not affect its performance in any manner.

Quality Control:

Physical and Chemical analysis:

Appearance	: Amber liquid
pH	: 6.8 - 8.2
Osmolality	: 280 - 340 mOsm/Kg H_2O
Endotoxin	: Value EU/ml
Hemoglobin	: < 20mg/dl
Identity	: Typical

Protein:

Total protein	: 3.0 - 4.5 g/dl
Albumin	: value g/dl
α-Globulin	: value g/dl
β-Globulin	: value g/dl
γ-Globulin	: value g/dl
IgG	: < 260µg/ml

Sterility Testing:

Aerobic bacteria	: Not detected
Anaerobic bacteria	: Not detected
Fungi	: Not detected
Mycoplasma	: Not detected

Virus testing:

Bovine Virus Diarrhea Virus (BVD-V)	: Not detected
Bovine Herpes Virus 1 (BHV-1)	: Not detected
Parainfluenza Type 3 (PI-3)	: Not detected

Antibody testing:

BVD-1 Antibody titer	: Value
BVD-2 Antibody titer	: Value

Growth promotion and cytotoxicity:

Each lot of serum is tested for growth promotion and cytotoxicity. Growth promotion shows the ability of the serum to support the growth of mesenchymal stem cells using a standardized low inoculum in media with 10% serum over a period of 10 to 14 days.

Storage and Shelf Life:

Store at -10°C to -40°C away from bright light.
Shelf life of the product is 5 years.
Thawed serum can be stored at 2-8°C up to eight weeks.
Multiple freeze thaw cycles should be avoided.
Serum should never be stored in frost free freezers. Frost free appliance undergoes intermittent warming cycles to prevent ice deposits and this might lead to multiple thawing of serum.
To avoid multiple freeze thaw cycles or long periods of refrigeration, we recommend freezing small aliquots which can be thawed and used as required.
Use before expiry date given on the label.