Characterized Fetal Bovine Serum, US Origin

HYCLONE SERA

DOMINIQUE DUTSCHER SAS

HyClone™ Characterized Fetal Bovine Serum (FBS) provides important proteins, hormones, growth factors, metabolites, and nutrients for your cell culture process (Fig 1). Characterized FBS is produced using true pool technology, which minimizes bottle-to-bottle variability.

Key features of Characterized FBS include

- Sourced in the USA
- Complete traceability back to original source
- Low in antibodies and high in growth factors
- Produced using true pool technology for uniformity and consistency from bottle to bottle

Specifications

Characterized FBS is filtered through three sequential 100 nm (0.1 µm) pore size-rated filters. Before dispensing, each lot of serum is pooled to ensure uniformity and consistency between bottles (true pool technology).

Characterized FBS is assayed for gamma globulin, alkaline phosphatase, lactate dehydrogenase, glutamic pyruvic transaminase, glutamic oxaloacetic transaminase, pH, total protein, albumin, blood urea nitrogen, creatinine, total bilirubin, sodium, potassium, calcium, chloride, inorganic phosphorus, osmolality, iron, total iron binding capacity (TIBC), percent iron saturation, glucose, and IgG. Included assays are subject to change without notice.

Product handling

Storage and handling

Sera should be stored at -10°C or lower. Once thawed, sera should be stored at 2°C to 8°C. To maintain quality, a conservative storage recommendation for sera at this temperature is no longer than six weeks. If the serum needs to be stored longer than six weeks after opening, it is recommended to aliquot the serum into convenient volumes and refreeze.



Fig 1. Characterized Fetal Bovine Serum provides important proteins and nutrients to your cell culture.

Thawing

Remove serum from -10°C (or lower) storage and place in a refrigerator overnight at 2°C to 8°C. Transfer the serum to a 37°C water bath, agitate periodically to mix the solutes concentrated at the bottom of the container. Do not hold the serum at 37°C any longer than necessary after thawing. Thawing serum in a bath above 40°C without mixing can denature the concentrated proteins in the bottom of the container and precipitates might form in the bottle. Thawing serum at higher temperatures is not recommended.

Alternatively, bottles can be placed directly from -10°C (or lower) storage into a 37°C water bath. Bottles should be agitated to enhance mixing and thawing. Turbidity and flocculent material might be present after thawing or after prolonged storage.

Experience indicates that regardless of the method used to thaw serum, it is critical that it is mixed during the thawing process to prevent the formation of gradients and subsequent precipitation. Because of differences in thawing rates of different components, serum will form a gradient if it is not mixed as it thaws. If serum is allowed to remain in such a gradient state, precipitation is likely to occur. Handle bottles that have been stored in freezer carefully. Avoid large temperature shifts and protect the serum from exposure to light. Wear protective clothes and equipment. Storage requirements are listed on the product label.

General culture recommendations

We recommend supplementation of classical media such as Dulbecco's Modified Eagle's Medium (DMEM) at a range between 5% and 10% FBS to support culture of a wide variety of cell lines and applications.

Quality control testing

Quality control test specifications are listed in Table 1.

Table 1. Test specifications

Endotoxin (Limulus amebocyte lysate gel clot assay)	≤ 25 EU/mL
Hemoglobin (spectrophotometric)	< 25 mg/dL
Sterility testing (current USP)	
Bacteria and fungi	No growth
Virus Testing (9 CFR 113.53)	
Fluorescent Antibody	
Bluetongue	Not detected
Bovine adenovirus	Not detected
Bovine parvovirus	Not detected
Bovine respiratory syncytial virus	Not detected
Bovine viral diarrhea virus	Not detected
Rabies	Not detected
Reovirus	Not detected
Cytopathogenic agents (e.g., IBR)	Not detected
Hemadsorbing agents (e.g., PI3)	Not detected
Mycoplasma	
Large volume, direct culture	Not detected
Hoechst DNA stain	Not detected
Certificate of suitability	Included

Related products

HyClone classical media

Our classical media are manufactured using ISO 9001:2008- and ISO 13485:2003-certified processes. All raw material components have passed strict quality control testing to ensure the appropriate level of quality. The classical media are hydrated using water for injection grade water and have undergone 0.1 µm sterile filtration.

Classical media that have been system tested with Characterized FBS to confirm product efficacy and homogeneity are

- Dulbecco's Modified Eagle's Medium (DMEM)
- Minimal essential medium (MEM)
- Eagle's minimal essential medium (EMEM)
- RPMI 1640 medium

HyClone phosphare buffered saline (PBS)

Our PBS products are manufactured according to cGMP guidelines using ISO 9001:2000-certified processes. The products have full traceability and documented origin of all formula ingredients.

HyClone trypsin protease

Our trypsin protease is derived from porcine pancreas and is gamma irradiated prior to hydration and filling. The product is formulated without calcium and magnesium.

Ordering information

Product	Size	Product code
HyClone Characterized Fetal Bovine Serum, US Origin	50 mL	SH30071.01
	100 mL	SH30071.02
	500 mL	SH30071.03

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