EIV22025E

ExCell Bio

New-born Calf Serum (Characterized)

For Research and Manufacturing Use

Not Intended for Diagnostic and Therapeutic Use

User Manual

Catalog Number	NCO500
	NCO100
	NCO050
	NCO025
	NCO010

PRODUCT DESCRIPTION

New-born Calf Serum (NCO) is a light brown clarified liquid derived from new-born bovine blood. It is obtained after coagulation and the removal of fibrinogen and certain coagulation factors from plasma. Bovine serum is the most widely used natural medium in cell cultures, containing a wealth of nutrients essential for cell growth. It is typically added to cell cultures at a ratio of 5-20%. Bovine serum contains various amino acids, vitamins, inorganic substances, lipids, and other nutrients necessary for maintaining cell growth. It also contains hormones, growth factors, and binding proteins such as insulin, bFGF, EGF, PDGF, and transferrin that promote cell growth. Additionally, bovine serum serves to detoxify, buffer, and inhibit protease activity, protecting cells from harm. ExCell Bio new-born calf serum is collected from healthy cattle in non-epidemic areas and is processed through collection, batch mixing, and triple 100 nm filtration. It is free from mycoplasma and bovine viruses such as BVDV, PI3, IBR, and BTV.

Applications:

1. Preparation of blocking and diluting solutions in immunological experiments.
2. Production of viruses and vaccines.

SPECIFICATION, STORAGE AND TRANSPORTATION REQUIREMENT

Product Name	Cat. #	Specification	Resource	Storage	Transportation	Shelf Life
New-born Calf Serum (Characterized)	NCO500	500 mL	China	-10℃ or lower	< 0℃	5 years
	NCO100	100 mL				
	NCO050	50 mL				
	NCO025	25 mL				
	NCO010	10 mL				

Q&A

Q1: What is the best way to store serum?

A: Serum for long-term storage should be stored in a refrigerator at -10°C or lower. It is recommended not to store serum at -80°C due to the significant temperature difference during thawing, which can lead to more precipitation. Serum should not be stored at 4°C for more than one month. If a bottle cannot be used at once, it is advised to store it in separate packages to avoid repeated freezing and thawing. The frozen volume of the serum will increase by about 10%, so reserve some space.

Q2: How to thaw serum without compromising product quality?

A: Thaw the frozen serum in a refrigerator at 4°C, and then transfer it to room temperature to thaw completely. During the thawing process, shake evenly to ensure uniform temperature and ingredient distribution, reducing the occurrence of precipitation.

Q3: What should I do if flocculent precipitates are found after the serum is thawed?

A: The sediment is primarily due to lipoprotein denaturation and fibrin precipitation in the serum. It does not affect the quality of the serum and can be removed by centrifugation at 500-1000×g for 5-10 minutes, or it can be left untreated.

Q4: How to distinguish the precipitation from contamination of serum?

A: After standing for a period, the upper layer of precipitation will be clear, while contamination will remain turbid.

Q5: What is the precipitate in the serum?

A: Various types of precipitates can occur in fetal bovine serum (FBS) and other serum products used for cell culture, with the most common being fibrin and calcium phosphate.

-Fibrin: Appears as large, flocculent precipitates visible to the naked eye.

-Calcium phosphate: Observed as small black particles under a microscope, often mistaken for microbial contamination due to Brownian motion.

Precipitation in serum is generally unpredictable and uncontrollable. However, these precipitates do not compromise the quality or performance of the serum.

DISCLAIMER

In all cases, the company's liability for this product is limited to the value of the product itself.