Exosome Depleted Fetal Bovine Serum (Characterized)

JOT-EV-02-07-01

Product Overview

For most cell cultivation, the standard culture medium requires the addition of fetal bovine serum (FBS) as a growth supplement on top of the base culture medium. However, commonly used FBS is typically derived from bovine serum, containing a significant amount of bovine-derived exosomes and exogenous extracellular vesicles. The exosomes present in the serum can introduce significant interference in exosome research outcomes.
To address these issues, Jotbody has introduced Exosome depleted Fetal Bovine Serum (Characterized), which completely meets the requirements for cell culture conditions in exosome research. Utilizing high-quality fetal bovine serum as the source serum, after specific processing, the removal rate of endogenous exosomes from fetal bovine serum exceeds 97%. Compared to medium containing normal source serum (FBS), it exerts an equal or even better promoting effect on cell growth and viability.

Protocol

1. After retrieving this product from the -20℃ or -80℃ freezing environment, thaw it by placing it in a 4℃ refrigerator for one day.
2. Through repeated experimental validation, it has been demonstrated that using 10% Exosome Depleted Serum in the culture of 293T cells yields excellent results. Some cells may also benefit from using 5% or 20% Exosome Depleted Serum. The appropriate concentration of Exosome Depleted Serum can be selected based on the specific cell type.

Precautions and Disclaimer

If the serum cannot be used completely within a short period, please consider aliquoting appropriately after thawing. When aliquot the serum, ensure that there is a certain volume of empty space in the aliquot bottle to prevent bottle cracking and contamination.

Thawing of bottled serum should follow a slow thawing method: place the serum stored in a -20°C or -80°C freezer into a 4°C refrigerator for approximately 1 day for gradual thawing.

Life Science Production

The Science Centre, 1 Blaydon Road, Sandy, Bedfordshire, SG19 1RZ

Tel: +44 (0) 1234 889180 Email: sales@lifesciencegroup.co.uk Web: www.lifesciencegroup.co.uk

After complete thawing, aliquot as necessary. During the thawing process, gently shake the serum every approximately 2 hours (try to avoid bubble formation) to achieve uniform temperature and composition, reducing the occurrence of precipitation. Do not directly transfer the serum from -20°C or lower temperatures to a 37°C water bath for thawing, as the drastic temperature change may lead to protein aggregation and precipitation, resulting in a decline in serum quality.

The flocculent precipitate in the serum is mainly caused by the denaturation of fibrinogen and lipoprotein in the serum after thawing and prolonged storage at 4°C.
The flocculent material does not affect the quality of the serum itself and may not require treatment. If necessary, it can be removed by centrifugation at 400 g for 5 minutes. However, it is not advisable to filter out the flocculent material as it may clog the filter membrane.

Do not leave the serum at 37°C for an extended period, as the serum will gradually become turbid, and the effective components in the serum will gradually deactivate, affecting the serum quality.

Cell growth adaptation issues when switching to serum from different sources or batches are unrelated to serum quality. For serum from new sources or batches, cell growth typically returns to normal after 1-2 passages.

For your safety and well-being, please wear a lab coat and disposable gloves while performing the operation.

This product is limited to scientific research use by professionals, and should not be used for clinical diagnosis or treatment, nor for food or medicine.

Life Science Production
The Science Centre, 1 Blaydon Road, Sandy, Bedfordshire, SG19 1RZ
Tel: +44 (0) 1234 889180 Email: sales@lifesciencegroup.co.uk Web: www.lifesciencegroup.co.uk