ITS-M, 500X (Insulin-Transferrin- Selenium Mixture, 500X)

Cat. No.: CC002-1000 Size: 1 ml
Store at 4°C

Description

ITS-M is a mixture of insulin, transferrin, and sodium selenite. It is a general cell supplement designed for use in basal media (e.g. MEM, DMEM, and RPMI-1640) and complex media (e.g. Ham's F-12 or DMEM/F12). It could be used to stimulate cell proliferation of a variety of cells under serum-reduced conditions and decrease the serum requirement of many cell types. Insulin is a hormone that promotes glucose and amino acid uptake by the cell. It is thought that the mitogenic effect of insulin is mediated by the insulin-like growth factor receptor, IGF-1 receptor. Transferrin is an iron transport protein that functions to transport iron into the cell. The protein also serves to detoxify the medium from oxygen radicals and peroxidase. Selenium is an enzyme cofactor that activates glutathione peroxidase, a player in the detoxification of oxygen radicals. When cells are cultured with medium contained ITS-M and low percent serum, proliferation is reported to be similar to those which medium were supplemented with 10 percent serum. Supplementation with ITS-M allows for a reduction in the serum requirement of the culture.

Feature

- Reduced the amount of Fetal Bovine Serum (FBS)

Application

- Supplement of cell culture.

Kit Content

Content	CC002-1000
ITS-M, 500X	1 ml

Quality Control

The quality of the ITS-M (Insulin-Transferrin- Selenium Mixture, 500X) is tested on a lot-to-lot basis to ensure consistent product quality.

Required Materials

- Cell culture medium
- Fetal Bovine Serum (FBS)

Formulation

Component	Concentration (g/L)
Insulin	5.00
Transferrin	2.75
Sodium Selenite	0.00335
Sodium Pyruvate	-
Ethanolamine	-

* Prepared in EBSS without Phenol Red.

Protocol

Working Concentration

1 ml vial of Insulin-Transferrin-Selenium Mixture is sufficient for 500 ml of medium. In general, it is necessary to add 1% serum to achieve optimal growth; some adherent cultures may require 2% serum supplementation.

Troubleshooting

Refer to the table below to troubleshooting problems that you may encounter when did culture cells with the supplement.

Problem	Cause	Solution
Poor growth	Incorrect concentration	Optimum concentration

Related Ordering Information

Cat. No.	Description	Size
SM502-1000	Ultrafect™ Reagent System	1 ml X 2 vials
MB506-1000	Ultra293™ Transfection Reagent	1 ml
MB508-1000	UltraTRAX™ Transfection Reagent	1 ml

Caution

1. During operation, always wear a lab coat, disposable gloves, and protective equipment.
2. All products are for research use only.