ITS-X Media Supplement (100×)

Introduction

ITS-X Media Supplement (100×) – fully named Insulin-Transferrin-Selenium-Ethanolamine Media Supplement (100×) – is a cell culture medium additive. It significantly reduces dependence on fetal bovine serum (FBS) by supplying essential components such as insulin, transferrin, selenium, and ethanolamine, and is commonly employed in serum-free or low-serum culture systems. The use of this supplement typically allows fetal bovine serum concentration to be lowered from 10% to 2-4%.

The insulin included in this product promotes cell metabolism and proliferation, transferrin supplies essential iron, selenium exerts antioxidant effects, and ethanolamine serves as a precursor of phosphoglycerides, helping to maintain the structure of plasma membranes and organelles. We offer three ITS media supplements. Their differences are listed in the table below.

This product is prepared in phenol red-free Earle's Balanced Salt Solution (EBSS), which is sterile-filtered and ready for direct use in cell culture.

Components	K2831	K2832	K2833
	ITS (100×)	ITS-A (100×)	ITS-X (100×)
	Concentration (g/L)		
Insulin	1.00	1.00	1.00
Transferrin	0.55	0.55	0.55
Sodium Selenite	0.00067	0.00067	0.00067
Sodium Pyruvate	-	11.0	-
Ethanolamine	-	-	0.2
Medium	MEM, RPMI-1640, or media with sodium pyruvate	MEM, RPMI-1640, or media without sodium pyruvate	MEM, F-12, DMEM, DMEM/F-12, or media with sodium pyruvate

Storage

Store at -20°C protected from light, stable for 2 years.

Protocol

1. Add ITS-X Media Supplement (100×) to the cell culture medium at a 1:100 dilution and mix well. For initial culture, supplement the medium with 2-4% fetal bovine serum. After the cells have adapted, the serum concentration can be gradually reduced.

Note

1. Aseptic technique should be observed when handling this product to avoid microbial contamination.
2. Because different cell lines vary in their serum dependence, an abrupt reduction in serum concentration may affect growth rates. It is recommended to acclimatize cells by gradually decreasing the serum level.
3. For long-term storage, keep the product at -20°C in the dark to maintain stability and efficacy. For frequent short-term use, it may be stored at 4°C protected from light and used within 6 months.
4. For your safety and health, please wear lab coats and gloves during the experiment.
5. For research use only. Not to be used in clinical diagnostic or clinical trials.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com