【Product Name】

Name：Trypsin EDTA Solution B (0.25% Trypsin, 0.05% EDTA)

Cat. No.: C3532-0100, C3532-0500

Size: 100 ml / 500 ml

【Product Description】

Trypsin, an animal-derived product, is the most commonly used enzyme for harvesting cells in culture. Trypsin is a pancreatic serine protease (proteolytic enzyme) with specificity for peptide bonds involving the carboxyl group of basic amino acids, including arginine and lysine. Animal Trypsin often consist crude mixture of lipases, nucleases, polysaccharides, and proteases extracted from porcine pancreas.

Most cell cultures grow as a single cell layer or sheet attached to a substrate known as a monolayer. When subculturing adherent cells, the intercellular and cell-to-substrate links or connections must be gently dissociated. Proteolytic enzymes, such as trypsin (i.e., a serine peptidase), break these bonds to create single-cell suspension from which new subcultures are prepared. Trypsin solutions are widely utilized as cell dissociation reagents for continuous cell culture of adherent growing cells. Trypsin proteolysis or trypsinization is a process in which proteins or cells are digested with trypsin and are thus said to be trypsinized. VivaCell's trypsin solution is designed not only to gently dissociate cells from almost any support substrates but also from each other. Trypsin, as a solution, is available with or without EDTA. EDTA is a chelator that binds calcium and magnesium ions that may otherwise inhibit the trypsin activity which then hydrolyzes and gains access to the linking bonds whether it is cell-cell and/or cell-substrate.

Crude trypsin is often the subculturing agent of choice for dissociation/disaggregation of adherent cells although the treatment may be cytotoxic if prolonged. Over-trypsinization may be one of the common causes of subculture problems.

Regarding the use of crude trypsin, some important facts must be noted:

- Cells must NEVER remain in the crude trypsin for longer than 3-5 minutes as the cells may be seriously damaged in the process (i.e., damage to the extracellular proteins such as integrins).
- Cells should NEVER be left without a fluid layer.
- Do not permit prolonged growth on cultureware as the cells will be very difficult to remove (i.e., after 5-7 days) as they become confluent.

For serum-free cell culture, the trypsinization reaction must be stopped by rapid separation of the cells via centrifugation or by utilizing trypsin inhibitors such as Soybean Trypsin Inhibitor (SBTI). SBTI is a single polypeptide that forms a stable, stoichiometric, and enzymically inactive complex with trypsin, thereby reducing the availability of trypsin. The cells may then be resuspended successfully in a suitable growth medium.

Predominant Characteristics of Trypsin EDTA Solution B include:

- Animal-Derived trypsin
- 0.05% EDTA
- Cell-Culture Tested
- Suitable for Cell-Culture Applications
- Long-term Storage When Handled Properly Under Defined Conditions

【Storage & Stability】

This product should be stored at -20°C. Do not use after the expiration date specified on the label. Deterioration of the product may be recognized by any of the following characteristics, including: (a) color change, (b) granulation/ clumping, (c) insolubility, (d) and/or decrease in expected performance. Any material described above should not be used and therefore discarded. Do not expose to light for prolonged periods as it is light-sensitive.

【Manufacturer】

Shanghai Dr. Cell Co., Ltd.

【Effective Date】

March 2023

【Precaution and Disclaimer】

For research use only, not for clinical diagnosis and treatment.