中科迈晨

PRODUCT DATASHEET

Recombinant Trypsin-EDTA Solution, 1X

Cell Culture- Dissociation Reagent

Catalog Number: CC063

Description:

Trypsin (Trypsin-EDTA) is the most commonly used reagent for cell dissociation. It is a single-chain polypeptide composed of 223 amino acids, derived from trypsinogen by removing a hexapeptide at the N-terminus between Lys6 and Ile7. Trypsin belongs to the serine hydrolase family, with active sites including His46 and Ser183. It cleaves at the carboxyl side of lysine and arginine residues, but its hydrolysis efficiency decreases when an acidic amino acid is present on either side of the cleavage site. Hydrolysis does not occur when proline is present on the carboxyl-terminal side of the cleavage site. The optimal pH range for trypsin activity is between 7.2 and 8.5. This product is a ready-to-use sterile reagent containing 0.25% recombinant trypsin, 1 mM EDTA, and phenol red.

Recombinant trypsin is produced using genetic engineering techniques for the digestion and passaging of cells during cell culture. Compared to traditional trypsin extracted from animal pancreas, recombinant trypsin offers higher purity and consistency, reducing batch-to-batch variability. Additionally, recombinant trypsin eliminates the risk of pathogen contamination associated with animal-derived products, enhancing the safety and reliability of cell culture experiments. This trypsin performs well in digesting extracellular matrix proteins (such as collagen and fibronectin) and is commonly used for the culture of various cell types, including epithelial cells, mesenchymal stem cells, and fibroblasts.

Components: 0.25% trypsin (recombinant), 1mM EDTA

Formulation: Sterile filtered

Pack Size: 100mL

Storage/Stability: -20ºC for minimal three years from date of manufacture.

Procedure:

Note: Thaw the trypsin before use and store it at 2-8ºC. It is recommended to avoid repeated freeze-thaw cycles.

1. Remove the culture medium from the cell culture flask/dish, and quickly rinse the cells 1-2 times with an appropriate amount of 1X PBS or DPBS without calcium and magnesium ions (Cat#: CC008 or Cat#: CC010). Completely remove the liquid from the flask/dish.
2. Add an appropriate amount of trypsin (0.5 mL for a 10-cm dish) and gently tilt the flask/dish to ensure the cells are fully in contact with the enzyme.
3. Place in a 37ºC incubator for 1-5 minutes, depending on the cell type.
4. Gently tap the flask/dish and observe under an inverted microscope. Most of the cells should be in suspension.
5. Add culture medium and pipette up and down 5-10 times. Seed the cells into new culture flasks/dishes according to experimental requirements.

Note:

1. Prolonged incubation with trypsin can damage cells, so the exposure time should be minimized as much as possible.
2. If the cells are cultured in serum-free medium, after trypsin digestion, add an equal volume of Trypsin Inhibitor (Cat#: CC064), mix well, then add 10 mL of 1X PBS, centrifuge at 500 x g for 10 minutes, remove the PBS, and resuspend the cells in the appropriate culture medium.

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