

EDTA Cell Detachment Solution (0.04%, with Phenol Red, Sterile)

Cat. No.: E1509623 | Pack size: 100ml / 500ml | Storage: Room temperature

Product Description

EDTA Cell Detachment Solution (0.04%, Phenol Red-Containing) is formulated with PBS, EDTA (Ethylenediaminetetraacetic acid), phenol red, and deionized water. It undergoes sterile processing and contains no trypsin. Its mechanism of action in cell dissociation is mainly based on chelation: by selectively binding divalent cations (e.g., Ca^{2+} , Mg^{2+}) at intercellular and cell-matrix junctions, it disrupts the stability of the cell adhesion system. This solution causes minimal cell damage and effectively detaches adherent cells from the surface of culture flasks or dishes to achieve cell separation. Phenol red can dynamically monitor pH changes for intuitive judgment of digestion status; it also regulates oxidative stress and enhances the adherence rate of certain cell types. For research use only. Not intended for clinical diagnosis or other purposes.

Features:

1. Mild in action;
2. Causes minimal damage and disruption to cells without affecting their biological properties, making it an excellent method for detaching tumor cells;
3. Can perform cell detachment in the presence of serum. Digested cells can be used for subculture, and also for experiments such as nuclear and cytoplasmic protein extraction, Western Blot, and Co-Immunoprecipitation (Co-IP). Under room temperature, most adherent cells can be detached within 3-10 minutes. This solution is recommended for primary stem cells but not for embryonic stem cell dissociation.

Materials to Be Prepared by Users

PBS, Culture medium, Inverted microscope, Centrifuge.

Operating Procedures (For Reference Only)

Detachment of Adherent Cells

1. Aspirate the culture medium and wash the cells once with sterile PBS or culture medium.
2. Add a small volume of EDTA Cell Detachment Solution (0.04%, Phenol Red-Containing), just enough to cover the cells (generally, add 10 times the effective volume of the cells).

3. Incubate at room temperature for 2-10 minutes; incubation at 37°C will accelerate the detachment reaction. Continue the process until the cells are completely detached. Note that the digestion time varies for different cell types. Alternatively, observe the cells under a microscope: once the cells shrink significantly, or the cell morphology at the bottom of the culture vessel changes obviously by visual inspection, or the cells can be just blown off by pipetting, aspirate the detachment solution immediately.

4. Add cell culture medium or 5 volumes of PBS buffer to terminate the reaction. If insufficient detachment is observed, add this solution again for re-digestion.

5. Centrifuge at 1000-2000×g for 3-5 minutes to pellet the cells. Discard the supernatant, remove as much of the cell detachment solution as possible, and resuspend the cells in complete medium containing serum for subsequent experiments.

Precautions

1. Minimize the number of repeated freeze-thaw cycles to avoid inactivation of the reagent.
2. Use the reagent as soon as possible after opening to prevent adverse effects on subsequent experimental results.
3. During the use of the cell detachment solution, take special care to avoid bacterial contamination of the solution.
4. Do not prolong the cell digestion time excessively, otherwise the cell growth status will be poor after plating.
5. The reaction rate at 37°C is 6-8 times faster than that at 4°C, but the cell mortality rate will increase accordingly.
6. For your safety and health, wear a lab coat and disposable gloves during operation.

Product Information

Item	Information
Cat. No.	E1509623
Product Name	EDTA Cell Detachment Solution (0.04%, with Phenol Red, Sterile) - BioReagent, for cell culture, sterile, 0.04%
Grade & Purity	0.04%
Synonyms	EDTA Cell Dissociation Solution (0.04%, Phenol Red-Containing, Sterile) EDTA Cell Detachment Solution EDTA Cell Dissociation Solution

Item	Information
Application	Cell Culture, Cell Separation, Co-IP, Protein Extraction, WB, Western Blot
Storage	Room temperature
Shipped In	Normal

Specifications

Parameter	Specification
Synonyms	EDTA Cell Dissociation Solution (0.04%, Phenol Red-Containing, Sterile) EDTA Cell Detachment Solution EDTA Cell Dissociation Solution
Specifications & Purity	BioReagent, for cell culture, sterile, 0.04%
Stability And Storage	Store at room temperature long term (12 months).
Storage	Room temperature
Shipped In	Normal

Safety & Precautions

- Read the current Safety Data Sheet (SDS) before use and follow local laboratory safety and EHS requirements.
- Wear appropriate personal protective equipment, including lab coat, gloves, and eye protection.
- Use only for research and laboratory applications. Do not use for human or animal diagnostics, therapeutics, food, household, or cosmetic applications.

Quality Control

QC Item	Method	Acceptable Range
Appearance	Visual inspection	Solution should be clear and free from visible contamination unless otherwise stated on the COA.
Product identity and specifications	Lot-specific quality testing	Conforms to the approved product specification and certificate of analysis.

QC Item	Method	Acceptable Range
Storage and packaging	Label and packaging inspection	Pack size, storage condition, lot number, and expiry information are verified before release.

Troubleshooting

Issue	Possible Causes	Corrective Action
Unexpected cell response	Incorrect working concentration, unsuitable cell type, or temperature deviation	Verify the recommended application, equilibrate reagent as required, and optimize incubation conditions for the cell type.
Reduced performance	Repeated freeze-thaw, expired reagent, or inappropriate storage	Store according to the label and aliquot when recommended. Avoid repeated freeze-thaw cycles.
Visible contamination	Aseptic handling failure or compromised container	Do not use contaminated reagent. Use sterile technique and inspect the container before use.

Recommended Applications

Cell Culture, Cell Separation, Co-IP, Protein Extraction, WB, Western Blot.

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.
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