

PEG-LiAc Solution

Cat. No.: P1524607 | Pack size: 5ml; 5×5ml | Storage: Store at 2-8°C

Overview

PEG is a high-molecular polymer. During competent transformation of yeast cells, PEG with a molecular weight of approximately 3000 yields the optimal promoting effect on transformation efficiency. In yeast transformation, PEG protects the cell membrane under high-concentration lithium acetate (LiAc) conditions and alleviates structural damage to the cell membrane caused by LiAc. Meanwhile, PEG facilitates tighter adhesion of plasmids to the yeast cell wall. LiAc induces a transient competent state in yeast cells, enabling the cells to take up exogenous DNA. PEG/LiAc Solution is an essential supporting reagent for transformation of prepared yeast competent cells, and 500 μ L of PEG/LiAc Solution is required for each single transformation reaction.

Product Composition and Formula

Product Component	Formula (ml/L)
50% PEG3350	800
1M LiAc (10×)	100
10× TE Buffer	100

Operation Protocol

1. Pretreatment of Carrier DNA: Incubate Carrier DNA at 95 °C in a metal bath for 5 min, or in a water bath with a floating rack at 95 °C for 3 min, then immediately place it on ice for rapid cooling.
2. Take 100 μ L yeast competent cells thawed on ice, sequentially add pre-cooled target plasmid (2–5 μ g), 10 μ L pretreated Carrier DNA and 500 μ L PEG/LiAc Solution. Gently pipette up and down several times to mix thoroughly. Incubate the mixture in a 30 °C water bath for 30 min; invert the tube 6–8 times to mix at the 15 min mark.
3. Transfer the tube to a 42 °C water bath and incubate for 15 min; invert the tube 6–8 times to mix at the 7.5 min mark.
4. Centrifuge at 5000 rpm for 40 s and discard the supernatant. Resuspend the pellet with 400 μ L ddH₂O, then centrifuge for 30 s and remove the supernatant.
5. Resuspend the cell pellet with 50 μ L ddH₂O or 0.9% NaCl solution, then spread the suspension onto agar plates.

Precautions

1. PEG tends to precipitate after long-term static storage. Be sure to shake the reagent thoroughly before each use to homogenize all components.
2. Unopened PEG/LiAc Solution can be stored long-term at 4 °C. After opening, it is recommended to store at -20 °C. Discard the reagent immediately once microbial contamination is observed.

Specifications

Item	Specification
Specifications & Purity	BioReagent, for Microscopy, Sterile
Stability And Storage	Store at 2-8 °C long term (12 months).
Storage	Store at 2-8°C
Shipped In	Wet ice. This product requires cold chain shipping. Ground and other economy services are not available.
Application	Microbial culture

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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