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A Geno Technology, Inc. (USA) brand name

PopLysis™ Complete Bacterial Lysis and Extraction Buffer

(Cat. # 786-1679)



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INTRODUCTION

PopLysis™ Complete Bacterial Lysis and Extraction buffer is part of our PopLysis™ buffer systems. PopLysis™ buffers are based on cocktail of membrane solubilizing detergents optimized to rapidly solubilize and pop open membrane structures allowing cellular proteins to spill out into lysis solution. PopLysis™ Complete Bacterial Lysis and Extraction buffer is all in one bottle formulation which contains membrane solubilizing detergents, lysozyme and nucleases. Bacteria solubilize immediately releasing entire cellular components as soon as PopLysis™ Complete Bacterial Lysis and Extraction buffer come in contact with cells. No mechanical force is required for 100% solubilization and recovery of cellular proteins. Furthermore, depending on the application, additional agents such as reducing agents and protease inhibitors cocktail may be added into PopLysis™ Complete Bacterial Lysis and Extraction Buffer.

PopLysis™ Complete Bacterial Lysis and Extraction Buffer is amine free buffer and is compatible with most downstream applications including running various chromatography, gel electrophoresis applications, and protein folding procedures. The buffer absorbs at 280 nm and thus not suitable for measuring protein concentration at 280 nm. Cell lysates prepared with it is compatible with Bicinchoninic Acid (BCA) Protein Assay (Cat. #786-570) and Ni™ protein assay (Non-Interfering Protein Assay™, Cat# 786-005).

PopLysis™ Complete Bacterial Lysis and Extraction Buffer reagent is suitable for lysis and protein extraction of both gram-positive and gram-negative bacteria. The buffer supplied is suitable for extracting proteins from approximately 60g wet cell pellet.

ITEM(S) SUPPLIED

Cat. #	Description	Size
786-1679	PopLysis™ Complete Bacterial Lysis and Extraction Buffer	250 ml

STORAGE CONDITION

The buffer is shipped with blue ice. Upon arrival store at 4°C.

ADDITIONAL ITEMS NEEDED

- DTT or other reducing agents depending upon application (Optional).
- Protease inhibitors (Optional, ProteaseArrest™, Cat. # 786-330)

IMPORTANT INFORMATION

- Warm the buffer to room temperature before use as at 4°C buffer turns to colloidal suspension.
- PopLysis™ Complete Bacterial Lysis and Extraction Buffer is suitable for both freshly pelleted bacterial cells or frozen cells.

- Depending on applications, DTT or other reducing agent may be added. Avoid EDTA as buffer contains lysozyme.
- If the inhibition of protease activity is required, add a cocktail of protease inhibitors to prevent protease activities during extraction procedure. We recommend our Bacterial ProteaseArrest™ (Cat. # 786-330).

PROTOCOL

A. Protein extraction from bacterial cells

1. Warm the buffer to room temperature.
2. Centrifuge bacterial culture at 5,000 x g for 10 minutes to pellet cells or use the frozen cell pellet.
3. Add 4 ml of prewarmed PopLysis™ Complete Bacterial Lysis and Extraction Buffer per gram of bacterial cell pellet.
4. Resuspend the pellet in buffer with help of pipette or brief vortex to get homogenous suspension.
5. Incubate the cell suspension at room temperature on shaker for 10-15 minutes.
6. Centrifuge the cell lysate at 15,000 x g for 5 minutes to get the soluble proteins in the cell supernatant.

B. Isolation of Inclusion Bodies.

For inclusion bodies isolation, after the lysis step centrifuge the bacterial lysate at 30,000 x g for 30 minutes at 4°C. Collect the inclusion bodies pellet and wash once with 5-fold or PBS. Centrifuge at 30,000 x g for 30 minutes at 4°C. Collect the inclusion bodies for solubilization and re-folding.

TROUBLESHOOTING

Issue	Suggested reason	Possible solution
PopLysis™ Complete Bacterial Lysis and Extraction Buffer has colloidal suspension	Buffer is cold	Warm to room temperature
Protein of interest is not solubilized	Protein of interest is in inclusion bodies	Adjust the expression conditions
		Isolate the inclusion bodies and proceed to inclusion body solubilization

RELATED PRODUCTS

Download our Sample Preparation and Protease & Phosphatase Inhibitors, Enzyme & Assays Handbooks.



<http://info.gbiosciences.com/complete-protein-sample-preparation-handbook/>

<http://info.gbiosciences.com/protease-phosphatase-inhibitors-enzymes-assay-handbook>

For other related products, visit our website at www.GBiosciences.com or contact us.



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