



pUC57 Plasmid DNA

Cat # P06**Pack Size: 5 µg****Storage: -20°C.**

It is stable for at least 6 months under these storage conditions. Avoid repeated freeze-thaw cycles.

Kit Content:

S.No	Plasmid	Concentration
1	pUC57	5µg (50µL-100ng/µl)

Introduction

The pUC57 vector is a widely used cloning vector in molecular biology research. It is a derivative of the well-known pUC19 vector and shares several features with it. With a length of approximately 2,710 base pairs, pUC57 is relatively small, making it easy to manipulate during cloning experiments. Its primary purpose is for cloning, and it is specifically designed for the generation of ExoIII deletions. The vector includes an ampicillin resistance gene (ampR), allowing transformed bacterial cells to grow in the presence of ampicillin. Researchers often choose pUC57 for routine cloning and expression studies due to its versatility and practical features.

Features

- High-copy number cloning vector
- Contains a pUC origin of replication for strong plasmid amplification
- Ampicillin resistance gene for selection in *E. coli*
- lacZα gene for blue/white screening of recombinants
- M13 forward and reverse sequencing primers for sequencing confirmation
- T/A cloning capability for fast and easy cloning
- Suitable for both blunt-end and cohesive-end cloning

Applications

- Cloning: The pUC57 plasmid DNA is widely used as a cloning vector in molecular biology research due to its small size and the presence of multiple restriction enzyme sites.
- Transformation: The plasmid DNA can be used for transformation of competent *E. coli* cells for cloning studies.
- Marker: The plasmid DNA can be used as a molecular weight marker in agarose gel electrophoresis.

Quality Control:

The quality of the pUC57 plasmid DNA is tested on a lot-to-lot basis to ensure consistent product quality. The plasmid DNA is analyzed by agarose gel electrophoresis and quantified by Nanodrop.

Protocol for pUC57 Plasmid DNA upon Arrival

1. Upon receipt of the pUC57 Plasmid DNA, immediately store it at -20°C to -80°C to maintain its stability.
2. Thaw the DNA on ice or at room temperature, but avoid repeated freeze-thaw cycles to prevent damage to the DNA.
3. Before use, gently vortex the DNA to ensure it is fully resuspended.
4. Verify the concentration and purity of the DNA by spectrophotometry and/or gel electrophoresis before use.
5. Use sterile techniques and proper biosafety precautions when handling the DNA to avoid contamination or exposure to hazardous materials.
6. Store any unused DNA at -20°C to -80°C for future use.

Note

- This product is for research use only and is not intended for human or animal diagnostic or therapeutic uses.
- Handling of plasmid DNA should be performed in a manner consistent with biosafety level 1 or 2 guidelines, as appropriate.
- The price of pUC57 Plasmid DNA is solely for the maintenance and distribution of the plasmid for research purposes only. Gene to protein Pvt. Ltd does not sell or make any profit from the use of this product.

