



Gene to Protein Pvt. Ltd.

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800 GENOME, 800 GENETIC



pUC19 Plasmid DNA

Cat # P05

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	pUC19	5µg (50µL-100ng/µl)

Introduction

pUC19 Plasmid DNA is a small (2686 bp), high copy number plasmid commonly used in molecular biology for cloning and genetic engineering experiments. The plasmid contains a multiple cloning site (MCS) with unique restriction sites that allow for easy insertion of DNA fragments. The plasmid also contains genes for ampicillin resistance and lacZα complementation, making it useful for screening and selection purposes.

Features

- High purity: The pUC19 plasmid DNA is purified using a proprietary chromatography method to ensure high purity and quality.
- It has a T7 promoter sequence upstream of the MCS.
- It includes the lacZα gene (part of the lac operon).
- It has a high copy number in bacterial cells.

Applications

- Cloning: The pUC19 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 pUC19 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 pUC19 Plasmid DNA upon Arrival

1. Upon receipt of the pUC19 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 pUC19 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.

