



pET 21b Plasmid DNA

Cat # P021**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 | pET21b | 5µg (50µL-100ng/µl) |

Introduction:

The pET-21b vector is a widely used bacterial expression vector designed for efficient protein expression in *Escherichia coli* (*E. coli*). It utilizes the T7 promoter, which drives strong and inducible expression. It has a 6xHis-tag at the N-terminus of the expressed protein. This vector contains a lac operator and lacZ alpha peptide for blue/white screening.

Features

- High copy number Plasmid for efficient amplification of target DNA
- T7 RNA polymerase promoter for strong expression of target genes
- N-terminal 6xHis-tag for easy purification of target proteins using IMAC
- Ampicillin resistance gene for selection in *E. coli*
- LacI repressor for tight regulation of gene expression

Applications

- Expression and purification of recombinant proteins in *E. coli*
- Cloning and subcloning of DNA fragments
- Mutagenesis and site-directed mutagenesis
- In vitro transcription of target genes

Quality Control

The quality of the pET 21b 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 pET 21b Plasmid DNA upon Arrival:

1. Upon receipt of the pET 21b 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 pET 21b 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.

