

TelN Protelomerase

REF: EG25203-S/M

Storage Condition

-20°C

Components

Component	EG25203S	EG25203M
TelN Protelomerase (5 U/µl)	50 µl	200 µl
10× TelN Buffer	1 ml	1 ml

Description

TeIN Protelomerase, from phage N15, cuts dsDNA at a TeIN recognition sequence (56 bp) and leaves covalently closed ends at the site of cleavage. It can efficiently convert circular double-stranded DNA into linearized double-stranded DNA with closed ends.

5'....TATCAGCACACAATTGCCCATTATACGCGCGTATAATGGACTATTGTGTGCTGATA....3' 3'....ATAGTCGTGTGTTAACGGGTAATATGCGCGCATATTACCTGATAACACACGACTAT....5'







Figure 2 Linearization of a circular plasmid

Definition of Activity Unit

One unit is defined as the amount of enzyme required to cleave 0.5 μg of pTeIN plasmid (313 fmol of TeIN recognition sites) in a total reaction volume of 50 μI in 30 minutes at 30°C .

Recommended reaction conditions

 $1\times$ TelN Buffer; Incubate at 30°C .

Heat Inactivation

 75°C , 5~min

Applications

1. Used in combination with phi29 DNA Polymerase for in vitro enzymatic synthesis of DNA.

- 2. Vaccine development.
- 3. DNA data storage.

Quality Control Assays

Protein Purity

The enzyme is \geq 95% pure as determined by SDS-PAGE analysis using Coomassie Blue staining.

Endonuclease Activity

A 20 μI reaction containing 200 ng of supercoiled plasmid and 5 U of TeIN Protelomerase incubated for 4 hours at 37 $\,^{\circ}C$ results in <20% conversion to the nicked or linearized form as determined by agarose gel electrophoresis.

Non-specific Nuclease Activity

A 20 μ I reaction containing 15 ng of dsDNA fragments and 5 U of TeIN Protelomerase incubated for 16 hours at 37 $\,^{\circ}$ C results in no detectable degradation of the dsDNA fragments as determined by agarose gel electrophoresis.

Protocol

1 Prepare the following reaction mixture on ice:

Reagent	Amount
dsDNA (<300 fmol of TeIRL sites)	x µl
10× TelN Buffer	2 µl
TelN Protelomerase (5 U/µI)	1 µl
ddH ₂ O	Up to 20 µl

Mix gently and spin down;

③ Incubate at 30°C for 30 minutes;

④ Heat inactivation: 75°C for 5 minutes.

Notice

1. The recognition site of TelN Protelomerase is not a palindromic sequence.

2. Use it in combination with 10× TeIN Buffer. Compatibility with 10× phi29 Buffer is <25%, and compatibility with other buffers has not been established.

3. This productis for research use only.

4. Please operate with lab coatsand disposable gloves, for your safety.