Gene to Protein Pvt. Ltd.
www.genetoprotein.com
info@genetoprotein.com
800 GENOME, 800 GENETIC

PAGE Staining Buffer

Cat # BUF34-500
Pack Size: 500 mL
Storage: Room Temparature

Introduction

PAGE Staining Buffer is specifically formulated for the staining of proteins in polyacrylamide gel electrophoresis (PAGE). This buffer ensures optimal visualization of protein bands and delivers consistent results across various applications.

Features

- PAGE Staining Buffer is specifically formulated for the staining of proteins in polyacrylamide gel electrophoresis (PAGE).
- This buffer ensures optimal visualization of protein bands and delivers consistent results across various applications.

Protocol

Preparation: The PAGE Staining Buffer is ready to use and requires no additional preparation.
Staining: Incubate the gel in the staining buffer for at least 2 hours.
Destaining: Follow the destaining protocol.
Note: The protocol provided is the standard protocol. Users may need to adjust or standardize the protocol based on the specific requirements of their experiment.

Safety Information:

- Handle with care and use appropriate personal protective equipment.
- Refer to the Safety Data Sheet (SDS) for detailed safety information.

Quality Control Assays

Every lot of PAGE Staining Buffer (BUF34-500) is quality control tested to ensure consistent performance.

PstI

Cat # RE109S
Pack Size: 500U
Storage: -20°C

Recognition Sequence: 5' CTGCA|G 3'
3' G|ACGTC 5'

Optimal Buffer: G2P Buffer γ

Introduction

PstI is a type 2 restriction enzyme that recognizes and cuts the DNA sequence 5'-CTGCA^G-3'. It is commonly used in molecular biology for the digestion of DNA fragments during cloning experiments.

Features

- Assayed on λ DNA
- Heat inactivation: 65°C for 20 minutes
- Ligation/recutting assay: After 20-fold overdigestion with PstI, >90% of the DNA fragments can be ligated and recut
- Overdigestion assay: No nonspecific activity detected after incubation of 1 µg of λ DNA with 20 units of PstI for 16 hours

Protocol

Component	50 µl Reaction
DNA	1 µg
10X G2P Buffer α	5 µl
PstI	1.0 µl
BSA (Stock: 10mg/ml)	1.0 µl (optional)
Nuclease-free Water	to 50µl

- Reaction setup (This is just an example to show the relative concentrations and volumes in the reaction may wish to set up a reaction ranging from 10 µl to 200 µl or more
- Incubate at 37°C for 15 minutes. Longer incubation times (sometimes overnight) may be followed as per specific requirement
- Heat inactivate enzyme at 65°C for 10 mins.
- Please note that supercoiled plasmid DNA and PCR fragments may have varied rate of cleavage and sometime needs more time to completely digest

Certificate of Analysis

Source :An *E.coli* strain, that carries the cloned PstI gene from *Providencia stuartii*
Supplied in :10mM Tris-Hcl (pH 7.6), 50mM NaCl, 0.1mM EDTA, 1mM DTT, 100ug/ml, BSA, 50% Glycerol.
Reaction Conditions :1X Buffer γ , BSA (100ug/ml), Incubate at 37°C for 10 min
Unit definition :One unit of PstI is defined as the amount of enzyme required to completely digest 1 µg of lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Optimal G2P Buffer :Buffer γ
Optimal temperature :37°C
Heat Inactivation :Enzyme is inactivated by incubation at 65°C for 10 minutes.

Quality Control Assays

Ligation of DNA fragments

DNA fragments are produced by an excessive over digestion of substrate DNA with each restriction endonuclease. These fragments are then ligated with T4 DNA Ligase at a 5' termini concentration of 0.1-1.0 µM. The ligated fragments are then recut with the same restriction endonuclease. Ligation can only occur if the 3' and 5' termini are left intact, and only those molecules with a perfectly restored recognition site can be recleaved. A normal banding pattern after cleavage indicates that both the 3' and 5' termini are intact, and the enzyme preparation is free of detectable exonucleases and phosphatases.

DNA digestion with PstI may be affected by some types of methylation

* In general, it is recommended to use 5–10 units of enzyme per µg of plasmid DNA, and 10–20 units for genomic DNA in a 1-hour digest. Enzyme volume should not exceed 10% of the total reaction volume to prevent star activity. Long incubation times may require addition of BSA (supplied) at 100µg/ml for stabilizing enzyme.

Enzyme Properties: When using a buffer other than the optimal (supplied) G2P-Buffer, it may be necessary to add more enzyme to achieve complete digestion.

Reagents Supplied with Enzyme: 10X Buffer γ.