Exonuclease III

rp216608

Storage/Transportation Condition
Store at -20°C for 24 months. Avoid repeated freeze/thaw cycles. Transport on dry ice.

Form Liquid

Source E. coli strain that carries E. coli Exonuclease III gene

Storage Buffer 50mM Tris, 50mM KCl,1mM DTT, 0.05mM EDTA, 50% Glycerol, 200μg/mL HSA, pH 8.0 10X Exonuclease III Reaction Buffer 660 mM Tris-HCl,6.6mM MgCl2, pH 8.0

Concentration 100U/μL

Unit Definition One unit is defined as the amount of enzyme required to produce 1 nmol of acid-soluble total nucleotides in 30 minutes at 37°C in a total reaction volume of 50μL.

Product Description

Exonuclease III is a double-stranded DNA-specific exonuclease. Exonuclease III catalyzes the removal of nucleotides from linear or nicked double stranded DNA in the 3' to 5' direction. The degradation of Exonuclease III could be initiated from 3' blunt end, 3' recessed end, 3' overhangs with less than 4 bases and nicked DNA.

Applications

Site-directed mutagenesis
Preparation of nested deletions in dsDNA
Preparation of strand-specific probes
Preparation of ssDNA for dideoxy-sequencing

Recommended Protocol for Digestion

1.Make the reaction mixture according to the following table:

Reagent	Quantity
DNA	5 μg
10X Exonuclease III Reaction Buffer	5 μL
Exonuclease III (100 U/μL)	0.5 μL
Nuclease-free H_2O	Up to 50 μL

2.Incubate at 37 °C for 30 min
3.Incubate at 75 °C for 10 min to stop the reaction.

Notes

1.The reaction temperature, salt concentration, and the ratio of enzyme to DNA all affect the enzyme activity.
2.Mononucleotides are released at base- dependent rates in the order (C>A=T>G).
3.Please wear a lab coat and disposable gloves while operating.