Lambda Exonuclease

Product description

Lambda Exonuclease is a DNA-specific exonuclease that progressively degrades double-stranded DNA from a 5' end in the 5' →3' direction. The optimal substrate is 5' phosphorylated double-stranded DNA, which also slowly degrades single-stranded DNA and non-phosphorylated substrates. The enzyme cannot begin digestion from the incision or notch of dna. The product can be used for 1) converting double-stranded DNA into single-stranded DNA; 2) DNA single-strand conformation polymorphism (SSCP) analysis; 3) Degradation of linearized plasmids, retention of supercoil plasmids; 4) Roll ring amplification, etc.

Composition and storage conditions

Components \ Size	1000 U	5000 U	10000 U
Lambda Exonuclease	0.2 ml	1 ml	2 ml
10X Lambda Exonuclease Reaction Buffer	0.1 ml	0.5 ml	1 ml
Store the components at -20 °C.			

Experimental operation

1. Refer to the following table to set up the reaction system in the ice bath:

Reagent	Volume	Final Concentration
DNA	X µl	1 µg is recommended
10X Reaction buffer	5 µl	1 X
Lambda Exonuclease	1 µl	5 U
Nuclease-free Water	to 50 µl	-

2. Blow the mixing reaction up and down with a pipette and perform rapid centrifugation.
3. Incubate at 37 °C for 30 min. If the amount of substrate DNA increases, so does the reaction time or enzyme amount.
4. Add EDTA with a final concentration of 10 mM to terminate the reaction.
5. Inactivate the enzyme at 75 °C for 10 min.

Note: Lambda Exonuclease should be added to the reaction system last, and attention must be paid to the mixed reaction system before joining; Store in an ice box or on an ice bath.

The properties of Product

1. Enzyme viable unit: 1 unit refers to the amount of enzyme required to catalyze the production of 10 nmol acid-soluble DNA nucleotide from a double-stranded DNA substrate within 30 minutes under 37 °C in a 50 μl reaction system.
2. Stored solution: 25 mM Tris-HCl(pH 8.0 @ 25°C)，50 mM Nacl，1 mM DTT，0.1 mM EDTA，50% Glycerol
3. 10x reaction solution: 670 mM Glycine-KOH (PH 9.4), 25 mM MgCl2, 0.1% Triton X-100
4. Quality assurance:
   1) SDS-PAGE Test Purity > 90%.
   2) No nonspecific endonuclease and exonuclease contamination.
   3) No RNase contamination.
5. Inactivation conditions: 10 min treatment at 75 °C can inactivate Lambda Exonuclease.

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