illustra Exonuclease I

Product Specification Sheet

Introduction

Product codes

E70073X

E70073Z

Description

Exonuclease I acts specifically on single-stranded DNA degrading it processively in the 3′- to 5′-direction, producing 5′-mononucleotides.

Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Safety

For use and handling of the products in a safe way, refer to the Safety Data Sheets.

Protocols

Removal of ssDNA from nucleic acid mixtures

Exonuclease I is active in a wide variety of buffers, including those commonly used in PCR and Restriction Endonuclease digests. Addition of Exonuclease I directly to those buffer systems will commonly achieve effective removal of ssDNA. For systems where buffer components are to be inhibiting or for nucleic acid mixes stored in water, we suggest the following protocol.

Step	Action
1	Prepare the following reaction mix:

Component	Volume
DNA mixture (containing up to 1 µL of ssDNA)	1 µL
Exonuclease I (10 U µL-1)	1 µL
10× Reaction Buffer	2 µL
Water	16 µL

2	Incubate at 37°C for 30 minutes.
3	Inactivate the Exonuclease I by heating to 80°C for 15 minutes.

PCR Clean-up using illustra Exonuclease I and illustra Shrimp Alkaline Phosphatase

Step	Action
1	Remove the illustra™ Shrimp Alkaline Phosphatase and Exonuclease I from the freezer and keep on ice whilst preparing the reaction.
2	Take a 5 µL aliquot of the completed PCR reaction mix.
3	Add 1 µL of illustra Shrimp Alkaline Phosphatase to the reaction mix.
4	Add 1 µL of illustra Exonuclease I to the reaction mix.
5	Incubate at 37°C for 15 minutes.
6	Incubate at 80°C for 15 minutes to inactivate the enzymes.

This reaction is scalable for larger quantities of PCR reaction mix. Simply add Alkaline Phosphatase and Exonuclease I in proportion to the volume of PCR reaction mix required.

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