XhoI Enzyme

Catalogue No.:abx071050

XhoI is expressed and purified from E.coli that carries the recombinant XhoI gene. This enzyme is not inhibited by dam or dcm methylation, but is inhibited by mammalian CpG methylation.

Contents:

Component	2.5 kU	5 kU
XhoI Enzyme	2.5 kU	2 × 2.5 kU
10X Tris-Ac Buffer	1 ml	2 × 1 ml
10X DNA Loading Buffer	1 ml	1 ml

Target: XhoI

Quality Control: The quality of the enzyme was evaluated by the following methods:
Ligation and re-digestion: DNA sequences were subjected to 10-fold overdigestion by XhoI Enzyme, followed by ligation using T4 DNA ligase at 25°C. ≥95% of DNA fragments were successfully ligated. Following successful ligation, sequences were overdigested, and ≥95% of sequences were successfully digested.
Incubation variability: 1 µg of DNA in a 50 µl reaction system was incubated with 10 U of XhoI Enzyme for 16 hours, or 1 U of XhoI Enzyme for 1 hour. The observed DNA band pattern was consistent in both reaction conditions.
Terminal integrity screening: A DNA vector was subjected to a 10-fold overdigestion using XhoI at a site within lacZ-alpha, then ligated, transformed and host cells inoculated to a X-gal/IPTG plate. Expression of active Beta-galactosidase produces a blue pigment from X-gal, leading to a blue colony, and indicates an intact lacZ-alpha gene. No expression of active Beta-galactosidase produces a white colony. ≤3% of colonies were white.
Exonuclease activity: A 50 µl reaction system containing 1 µg of ^{3}H DNA and 100 U of XhoI incubated at 37°C for 4 hours releases < 0.1% radioactive products.
Endonuclease activity: A 50 µl reaction system containing 1 µg of pBR322 RFI DNA and 15 U of XhoI incubated at 37°C for 4 hours results in <10% conversion from RFI to RFII.

Storage: Store at -20°C. Stable for up to 24 months from date of receipt.

Molecular Weight: 27.9 kDa

Buffer: **10X Tris-Ac Buffer:** 500 mM Tris-Ac, pH7.9, containing 1 M Kac, 120 mM $MgAc_2$, 1 mg/ml BSA.
Storage Buffer: 20 mM Tris HCl, pH 7.4, containing 250 mM NaCl, 0.1 mM EDTA, 1.5 mM DTT, 400 µg/ml BSA, 50% Glycerol.

Activity: Active

Abbexa LTD, Cambridge, UK · Phone: +44 (0) 1223 755950 · Fax: +44 (0) 1223 755951
Abbexa LLC, Houston, TX USA · Phone: +1 832 327 7413
Abbexa BV, Leiden, NL
Website: www.abbexa.com · Email: info@abbexa.com

Biological Activity: One unit is defined as the quantity of enzyme required to digest 1 µg of lambda DNA in 1 hour at 37°C, with a total reaction volume of 50 µl.

Concentration: 20 kU/ml

Note: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.
This product is shipped with dry ice.

Directions for use: **Reaction Components**

Component	Volume/Quantity	Volume/Quantity
DNA	≤ 1 µg	1 µg - 2 µg
XhoI Enzyme	0.5 µl	1 µl
10X Tris-Ac Buffer	2 µl	5 µl
Nuclease-free water	Variable	Variable

Notes:
• Incubate at 37°C for 5-15 minutes. Inactivate the XhoI Enzyme by adding 10X DNA Loading Bufer to a final concentration of 1X, or by incubating at 65°C for 20 minutes.
• Prior to use, bring the Tris-Ac Buffer to room temperature and mix fully.
• For digestion of > 2 µg DNA, or incomplete digestion, increase the total reaction volume and XhoI volume, and keep the DNA quantity the same.
• The total quantity of enzyme should be less than 1/10 of the reaction system volume. For example, the maximum enzyme quantity for a 50 µl reaction system is 5 µl.

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