Creative Enzymes®

Native Vaccinia virus Topoisomerase I

Cat. No. NATE-0708

Lot. No. (See product label)

Introduction

Description	Topoisomerase I relaxes supercoiled DNA molecules. The enzyme initiates transient breakages and rejoins of phosphodiester bonds in superhelical turns of closed-circular DNA. Enzyme activity is independent of right-and left-handed superhelices.
Applications	Enzyme activity is increased in the presence of 2.5 mM Mg2+. Topoisomerase I from vaccinia virus can be used for studying pivotal biological pr ocess such as-replication, transcription, recombination as well as DNA structure and topology which includes chromatin reconstitution in vitro and the degree of supercoiling of DNA. Additionally, the product helps in relaxing the DNA coils and exposes the restriction sites which facilitates in enhancing the restriction endonuclease digestion of resistant DNA. It is also used for assaying mutant plasmids which differ in length by only one base-pair.
Synonyms	Topoisomerase I; EC 5.99.1.2; type I DNA topoisomerase; untwisting enzyme; relaxing enzyme; nicking-closing enzyme; swivelase; ω-protein; deoxyribonucleate topoisomerase; topoisomerase; type I DNA topoisomerase; DNA topoisomerase; TOPO I

Product Information

Source	Vaccinia virus
Form	buffered aqueous solution; Solution in 50 mM Tris HCl, pH 7.5, containing 100 mM NaCl, 1 mM EDTA, 1 mM DTT, 0.1% Triton X-100, and 50% glycerol.
EC Number	EC 5.99.1.2
CAS No.	80449-01-0
Molecular Weight	mol wt 32 kDa
Unit Definition	One unit coverts 1 µg of supercoiled closed circular (Form I) pUC19 DNA to relaxed closed circular form (Form II) in 1 hr at 37°C.

Storage and Shipping Information

Storage	−20°C