Creative Enzymes®

Native Human Topoisomerase I

Cat. No. NATE-0707

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 Topoisomerase I has been used in a study to assess implications for the regulation of HIV-1 replication. Topoisomerase I has also been used in a study to investigate the tumor suppressor protein kinase Chk2 is a mediator of anoikis of intestinal epithelial cells.

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 Human

Form buffered aqueous glycerol solution; Solution containing 20 mM sodium phosphate, pH 7.4, 300 mM NaCl, 50 µg/mL BSA, 50% glycerol, and between 25-100 mM imidazole (concentration will be lot dependent).

EC Number EC 5.99.1.2

CAS No. 80449-01-0

Molecular Weight mol wt 100 kDa

Activity > 2 units/µL

Pathway Caspase cascade in apoptosis, organism-specific biosystem

Function ATP binding; DNA binding; DNA topoisomerase (ATP-hydrolyzing) activity; DNA topoisomerase type I activity; chromatin DNA binding; chromatin binding; nucleotide binding; protein binding

Unit Definition One unit will relax 0.25 µg of supercoiled plasmid DNA in 30 minutes at pH 7.9 at 37°C.

Storage and Shipping Information

Storage −70°C