

Active Recombinant Human Topoisomerase (DNA) I, N-terminal Domain

Cat. No. TOP1-1197H Lot. No. (See product label)

SPECIFICATION

Species Human

Source Sf9 Cells

Description

Human DNA Topoisomerase I is the best studied of the DNA topoisomerase family. It catalyzes the relaxation of both positive and negative supercoils without the requirement of energy. In addition to DNA replication and transcriptional activation, DNA Topoisomerase I also plays a major role in pre-mRNA splicing, cell cycle, and other gene regulatory pathways during cell growth and development. The N-terminal 214 amino acids of Topoisomerase I comprise a highly charged N-terminal domain (NTD) involved in protein-protein interactions with a number of cellular proteins, including SV40 T antigen, nucleolin, SR proteins, p53 and other transcription factors. The N-terminal domain (NTD) of human DNA Topoisomerase I protein (residue 1-197) was expressed in baculovirus system and purified by using an affinity column and FPLC chromatography. Purified Topo I NTD can be tested for *in vitro* transcription, pre-mRNA splicing, DNA binding and protein-protein interaction assays. Purified Topo I protein (NTD) is greater than 95% homogeneous and contains no detectable protease, DNase, and RNase activity.

Form

Liquid. Supplied in 20 mM Tris-HCl, pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20 % glycerol.

Purity

> 95% by SDS-PAGE.

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Activity	0.1-10 ng have been tested for in vitro relaxation assay in a 20 µl reaction and contain no detectable DNA relaxation activity.
Usage	For in vitro use only.
Storage	Quality guaranteed for 12 months store at -80°C. Avoid freeze / thaw cycles.
GENE INFORMATION	
Gene Name	TOP1 topoisomerase (DNA) I [Homo sapiens]
Synonyms	TOP1; topoisomerase (DNA) I; TOPI; DNA topoisomerase1; EC 5.99.1.2; OTTHUMP00000031713; DNA topoisomerase I; topoisomerase I; type I DNA topoisomerase
Gene ID	7150
mRNA Refseq	NM_003286
Protein Refseq	NP_003277
MIM	126420
UniProt ID	P11387
Chromosome Location	20q12-q13.1
Function	ATP binding; DNA topoisomerase (ATP-hydrolyzing) activity; DNA topoisomerase type I activity; chromatin binding; nucleotide binding; protein binding

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