

# Recombinant Human Topoisomerase (DNA) I

**Cat. No.** TOP1-519H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human Topoisomerase (DNA) I protein (765 amino acids) was expressed in <i>Baculovirus</i> system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | Human DNA topoisomerase I (topo I) is a monomeric protein of 765 amino acids encoded by a single-copy gene. Based on its function, DNA topoisomerase I has been subdivided into four distinct domains. The N-terminal 214 amino acids of topo I comprise a highly charged N-terminal domain involved in protein-protein interactions with a number of cellular proteins. The highly conserved core domain expanded from amino acids 215 to 636 contains most catalytic residues and retains DNA binding activity. The active C-terminal domain (residues 713-765) is connected to the core domain by a poorly conserved linker domain (residues 636-712). |
| <b>Purity</b>           | Purity > 95% by SDS-PAGE analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Endotoxin</b>        | 1 unit equals 1 nanogram purified protein. 0.1 – 1 unit (ng) is sufficient for relaxing 0.5 µg of pBR322 supercoiled DNA in a 20 µl reaction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## GENE INFORMATION

|                  |                                             |
|------------------|---------------------------------------------|
| <b>Gene Name</b> | TOP1 topoisomerase (DNA) I [ Homo sapiens ] |
|------------------|---------------------------------------------|

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|                            |                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonyms</b>            | TOP1; topoisomerase (DNA) I; TOPI; DNA topoisomerase1; EC 5.99.1.2; OTTHUMP00000031713; DNA topoisomerase I; topoisomerase I; type I DNA topoisomerase |
| <b>Gene ID</b>             | <a href="#">7150</a>                                                                                                                                   |
| <b>mRNA Refseq</b>         | <a href="#">NM_003286</a>                                                                                                                              |
| <b>Protein Refseq</b>      | <a href="#">NP_003277</a>                                                                                                                              |
| <b>MIM</b>                 | <a href="#">126420</a>                                                                                                                                 |
| <b>UniProt ID</b>          | <a href="#">P11387</a>                                                                                                                                 |
| <b>Chromosome Location</b> | 20q12-q13.1                                                                                                                                            |
| <b>Function</b>            | ATP binding; DNA topoisomerase (ATP-hydrolyzing) activity; DNA topoisomerase type I activity; chromatin binding; nucleotide binding; protein binding   |

PDB rendering based  
on 1a31.



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