

## Active Recombinant Human TOP1, His-tagged

**Cat. No.** TOP1-3745H    **Lot. No.** (See product label)

### SPECIFICATION

**Product Overview**      Recombinant human topoisomerase I produced in Sf9 cells is a single polypeptide chain with a 6His tag at the N-terminus. It contains 779 (15+764) amino acids having a predicted molecular mass of approximately 92.5kD, but migrates in SDS-PAGE with an apparent molecular mass of 105kD.

**Species**                      Human

**Source**                        Insect Cells

**Description**                This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This enzyme catalyzes the transient breaking and rejoining of a single strand of DNA which allows the strands to pass through one another, thus altering the topology of DNA. This gene is localized to chromosome 20 and has pseudogenes which reside on chromosomes 1 and 22.

**Form**                            20mM Tris-Cl (pH7.9), 20% Glycerol, 100mM NaCl, 1mM DTT and 0.5mM EDTA

**Bio-activity**                 DNA Topoisomerase I catalyzes the latering the topology of DNA during transcription and replication. Recombinant Topo I protein is ideal for the studies of DNA topology and other related function assays.

**AA Sequence**                MHHHHHHGRRASVEFSGDHLHNSQIEADFRLNDSHKHKDKHKDREHRHKEHKKE  
 KDREKSKHSNSEHKDSEKK HKEKEKTKHKDGSSEKHKDKHKDRDKEKRKEEKVRA  
 SGDAKIKKEKENGFSPPQIKDEPEDDGYFVPPKEDIK PLKRPRDEDDADYKPKKIK  
 TEDTKKEKRRKLEEEEDGKLKPKNKDKDKKVPEPDNKKKPKKEEQKWKWWE

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EERYPEGIKWKFLEHKGPVFAPPYEPLPENVKFYDYGKVMKLSPKAEEVATFFAKML  
 DHEYTTKEIFRKNFFKD WRKEMTNEEKNIITNLSKCDFTQMSQYFKAQTEARKQMS  
 KEEKLKIKEENEKLLKEYGFCIMDNHKERIANFK IEPPLFRGRGNHPKMGMLKRRRI  
 MPEDIIINCSKDAKVPSPPPGHKWKEVRHDNKVTWLVSWTENIQGSIKYIM LNPSSR  
 IKGEKDWQKYETARRLLKCVDKIRNQYREDWKSSEMKVRQRAVALYFIDKLALRAG  
 NEKEEGETADT VGCCSLRVEHINLHPELDGQEYVVEFDLFGKDSIRYYNKVPVEKR  
 VFKNLQLFMENKQPEDDLFDRLNTGILNK HLQDLMEGLTAKVFRTYNASITLQQQLK  
 ELTAPDENIPAKILSYNRANRAVAILCNHQRAPPKTFEKSMMNLQ TKIDAKKEQLADA  
 RRDLSAKADAKVMKDAKTKKVVESKKAQVQRLEEQLMKLEVQATDREENKQIALG  
 TSKLN YLDPRIITVAWCKKWGVPIEKIYNKTQREKFAWAIDMADEDYEF

**Purity** ≥90%, as determined by SDS-PAGE

**Usage** FOR RESEARCH ONLY

**Storage** The protein sample can be stored under sterile conditions at 2- 8 centigrade for one month or at -70 centigrade for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.

## GENE INFORMATION

**Gene Name** TOP1 topoisomerase (DNA) I [ Homo sapiens ]

**Official Symbol** TOP1

**Synonyms** TOPI; DNA topoisomerase 1; type I DNA topoisomerase

**Gene ID** 7150

**mRNA Refseq** NM\_003286

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<b>Protein Refseq</b>	NP_003277
<b>MIM</b>	126420
<b>UniProt ID</b>	P11387
<b>Chromosome Location</b>	20q12-q13.1
<b>Pathway</b>	Caspase cascade in apoptosis, organism-specific biosystem; Integrated Pancreatic Cancer Pathway, organism-specific biosystem

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