

## Recombinant Human TOP1 Protein (K175-A659), His tagged

Cat. No. TOP1-1019H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human 8His-TEV-(G)-TOP1(K175-A659) Protein was expressed in Insect cell.
<b>Species</b>	Human
<b>Source</b>	Insect Cells
<b>ProteinLength</b>	K175-A659
<b>Description</b>	Releases the supercoiling and torsional tension of DNA introduced during the DNA replication and transcription by transiently cleaving and rejoining one strand of the DNA duplex. Introduces a single-strand break via transesterification at a target site in duplex DNA. The scissile phosphodiester is attacked by the catalytic tyrosine of the enzyme, resulting in the formation of a DNA-(3'-phosphotyrosyl)-enzyme intermediate and the expulsion of a 5'-OH DNA strand. The free DNA strand then rotates around the intact phosphodiester bond on the opposing strand, thus removing DNA supercoils. Finally, in the religation step, the DNA 5'-OH attacks the covalent intermediate to expel the active-site tyrosine and restore the DNA phosphodiester backbone. Regulates the alternative splicing of tissue factor (F3) pre-mRNA in endothelial cells. Involved in the circadian transcription of the core circadian clock component ARNTL/BMAL1 by altering the chromatin structure around the ROR response elements (ROREs) on the ARNTL/BMAL1 promoter.
<b>Form</b>	Liquid

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<b>Endotoxin</b>	< 0.01 EU per µg of the protein
<b>Purity</b>	90%
<b>Stability</b>	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
<b>Storage</b>	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
<b>Storage Buffer</b>	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
<b>Shipping</b>	It is shipped out with blue ice.

## GENE INFORMATION

<b>Gene Name</b>	TOP1 topoisomerase (DNA) I [ Homo sapiens (human) ]
<b>Official Symbol</b>	TOP1
<b>Synonyms</b>	TOP1; topoisomerase (DNA) I; DNA topoisomerase 1; type I DNA topoisomerase; TOPI;
<b>Gene ID</b>	7150
<b>mRNA Refseq</b>	NM_003286
<b>Protein Refseq</b>	NP_003277
<b>MIM</b>	126420

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UniProt ID

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