

## Recombinant Human TOP2B, His-tagged

Cat. No. TOP2B-19H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant hTOP2βcore (residues 445-1201), fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques. Theoretical pI: 6.5

**Species** Human

**Source** E.coli

**ProteinLength** 445-1201 a.a.

**Description** This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This nuclear enzyme is involved in processes such as chromosome condensation, chromatid separation, and the relief of torsional stress that occurs during DNA transcription and replication. It catalyzes the transient breaking and rejoining of two strands of duplex DNA which allows the strands to pass through one another, thus altering the topology of DNA. Two forms of this enzyme exist as likely products of a gene duplication event. The gene encoding this form, beta, is localized to chromosome 3 and the alpha form is localized to chromosome 17. The gene encoding this enzyme functions as the target for several anticancer agents and a variety of mutations in this gene have been associated with the development of drug resistance. Reduced activity of this enzyme may also play a role in ataxia-telangiectasia. Alternative splicing of this gene results in two transcript variants; however, the second variant has not yet been fully described.

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<b>Form</b>	Liquid. 20 mM Tris-HCl, 200 mM NaCl, pH7.4.
<b>Molecular Mass</b>	~87 kDa
<b>AA Sequence</b>	<p>SVKYSKIKGIPKLDDANDAGGKHSLECTLILTEGDSAKSLAVSGLGVIGRDRYGVFPL            RGKILNVREASHKQIME NAEINNIKIVGLQYKKSYYDDAESLKTLYGKIMIMTDQQD            GSHIKGLLINFIIHWNWPSLLKHGFLEEFITPIV KASKNKQELSFYSIPEFDEWKKHIEN            QKAWKIKYYYKGLGTSTAKEAKEYFADMERHRILFRYAGPEDDAAITLAF SKKKIDDR            KEWLTFMEDRRQRRLHGLPEQFLYGTATKHLTYNDFINKELILFSNSDNERSIPSLV            DGFKPGQRK VLFTCFKRNDKREVKVAQLAGSVAEMSAYHHGEQALMMTIVNLAQN            FVGSNNINLLQPIGQFGTRLHGGKDAASP RYIFTMLSTLARLLFPAVDDNLLKFLYDD            NQRVEPEWYIPIPMVLINGAEGIGTGWACKLPNYDAREIVNRR MLDGLDPHPML            PNYKNFKGTIQELGQNQYAVSGEIFVDRNTVEITELPVRTWTQVYKEQVLEPMLNG            TDKTPAL ISDYKEYHTDTTVKFVVKMTEEKLAQAEAAGLHKVFKLQTTLTCSMVLV            DHMGCLKKYETVQDILKEFFDLRLS YYGLRKEWLVGMLGAESTKLNNQARFILEKIQ            GKITIENRSKKDLIQMLVQRGYESDPVKAWKEAQEKAAEEDET QNQHDDSSSDSGT            PSGPDFNYILNMSLWLSLTKKVEELIKQRDAKGREVNDLKRKSPSDLWKEDLAAFVE            ELDKV ESQERED</p>
<b>Purity</b>	> 92% as determined by SDS-PAGE
<b>Storage</b>	Short Term Storage at +4°C, Long Term Storage at -20°C to -80°C. Avoid freeze/thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	TOP2B topoisomerase (DNA) II beta 180kDa [ Homo sapiens (human) ]
<b>Official Symbol</b>	TOP2B
<b>Synonyms</b>	TOPIIB; top2beta; TOP2B; DNA topoisomerase II, beta isozyme; topo II beta; antigen

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MLAA-44; topoisomerase IIb; topoisomerase II beta; U937 associated antigen; DNA topoisomerase II beta; DNA topoisomerase II, 180 Kd; EC 5.99.1.3; DNA topoisomerase 2-beta

**Gene ID** 7155

**mRNA Refseq** NM\_001068

**Protein Refseq** NP\_001059

**MIM** 126431

**UniProt ID** Q02880

**Chromosome Location** 3p24

**Function** ATP binding; DNA topoisomerase (ATP-hydrolyzing) activity; chromatin binding; histone deacetylase binding; nucleotide binding; protein C-terminus binding; protein heterodimerization activity; protein kinase C binding

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