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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Form	Liquid. 20 mM Tris-HCl, 200 mM NaCl, pH7.4.
Molecular Mass	~87 kDa
AA Sequence	SVKYSKIKGIPKLDDANDAGGKHSLECTLILTEGDSAKSLAVSGLGVIGRDRYGVFPL RGKILNVREASHKQIME NAEINNIIKIVGLQYKKSYDDAESLKTLRYGKIMIMTDQDQD GSHIKGLLINFIHHNWPSLLKHGFLEEFITPIV KASKNKQELSFYSIPEFDEWKKHIEN QKAWKIKYYKGLGTSTAKEAKEYFADMERHRILFRYAGPEDDAAITLAF SKKKIDDR KEWLTNFMEDRRQRRLHGLPEQFLYGTATKHLTYNDFINKELILFSNSDNERSIPSLV DGFKPGQRK VLFTCFKRNDKREVKVAQLAGSVAEMSAYHHGEQALMMTIVNLAQN FVGSNNINLLQPIGQFGTRLHGGKDAASP RYIFTMLSTLARLLFPAVDDNLLKFLYDD NQRVEPEWYIPIIPMVLINGAEGIGTGWACKLPNYDAREIVNNVRR MLDGLDPHPML PNYKNFKGTIQELGQNQYAVSGEIFVVDRNTVEITELPVRTWTQVYKEQVLEPMLNG TDKTPAL ISDYKEYHTDTTVKFVVKMTEEKLAQAEAAGLHKVFKLQTTLTCNSMVLF DHMGCLKKYETVQDILKEFFDLRLS YYGLRKEWLVGMLGAESTKLNNQARFILEKIQ GKITIENRSKKDLIQMLVQRGYESDPVKAWKEAQEKAAEEDET QNQHDDSSSDSGT PSGPDFNYILNMSLWSLTKEKVEELIKQRDAKGREVNDLKRKSPSDLWKEDLAAFVE ELDKV ESQERED
Purity	> 92% as determined by SDS-PAGE
Storage	Short Term Storage at +4°C, Long Term Storage at -20°C to -80°C. Avoid freeze/thaw cycles.

GENE INFORMATION

Gene Name	TOP2B topoisomerase (DNA) II beta 180kDa [Homo sapiens (human)]
Official Symbol	TOP2B
Synonyms	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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