Topo III Alpha (TOP3A) Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	Topo III alpha (TOP3A), Polyclonal Antibody
Full Product Name	Topo III alpha Polyclonal Antibody
Product Gene Name	anti-TOP3A antibody
Clonality	Polyclonal
Molecular Weight	101,208 Da
OMIM	601243
3D Structure	ModBase 3D Structure for Q13472
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-TOP3A antibody	MBS8526647 is an antibody targeting TOP3A. Also known as Topo III alpha Polyclonal Antibody.
Other Notes	Small volumes of anti-TOP3A antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TOP3A. It may not necessarily be applicable to this product.

NCBI GI #	1002819406
NCBI GeneID	7156
NCBI Accession #	NP_001307688.1
UniProt Primary Accession #	Q13472
UniProt Secondary Accession #	Q13473; A8KA61; B4DK80; D3DXC7
UniProt Related Accession #	Q13472
GenBank Nucleotide #	NM_001320759.1
NCBI Official Full Name	DNA topoisomerase 3-alpha isoform 2
NCBI Official Synonym Full Names	DNA topoisomerase III alpha
NCBI Official Symbol	TOP3A
NCBI Official Synonym Symbols	TOP3; ZGRF7
UniProt Protein Name	DNA topoisomerase 3-alpha
UniProt Synonym Protein Names	DNA topoisomerase III alpha
Protein Family	DNA topoisomerase
UniProt Gene Name	TOP3A
UniProt Synonym Gene Names	TOP3
NCBI Protein Information	DNA topoisomerase 3-alpha

NCBI Summary for TOP3A	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 reducing the number of supercoils and altering the topology of DNA. This enzyme forms a complex with BLM which functions in the regulation of recombination in somatic cells. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2016]
UniProt Comments for TOP3A	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-(5'-phosphotyrosyl)-enzyme intermediate and the expulsion of a 3'-OH DNA strand. The free DNA strand then undergoes passage around the unbroken strand thus removing DNA supercoils. Finally, in the religation step, the DNA 3'-OH attacks the covalent intermediate to expel the active-site tyrosine and restore the DNA phosphodiester backbone. Essential component of the RMI complex, a complex that plays an important role in the processing of homologous recombination intermediates to limit DNA crossover formation in cells. Has DNA decatenation activity.
Research Articles on TOP3A	**1.** The results show that Topo IIIalpha stimulates DNA unwinding by BLM in a manner that is potentiated by RMI1-RMI2, and that the processivity of resection is reliant on the Topo IIIalpha-RMI1-RMI2 complex.
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