

Topo II α (1301-1531): sc-4399

BACKGROUND

DNA topoisomerase I and II (Topo I and Topo II) are nuclear enzymes that regulate the topological structure of DNA in eukaryotic cells by transiently breaking and rejoining DNA strands. Eukaryotic topoisomerases are capable of relaxing both positive and negative supercoils, whereas prokaryotic topoisomerases relax only negative supercoils. DNA topoisomerases play a role in DNA replication, recombination, and transcription and have been identified as targets of numerous anticancer drugs. Topo I, a ubiquitously expressed, soluble enzyme, acts by introducing a transient break in one strand of DNA, while Topo II acts by making a transient double-strand break. Topo II is encoded by two different genes to generate two distinct isoforms that are designated Topo II α and Topo II β . The 180 kDa isoform, Topo II β , and the 170 kDa isoform, Topo II α , are largely homologous at their N-terminal three quarters, however, the C-terminal segments are considerably divergent, suggesting that these regions may mediate different cellular functions and account for the observed differential tissue expression patterns of the two isoforms.

REFERENCES

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SOURCE

Topo II α (1301-1531) is expressed in *E. coli* as a 53 kDa tagged fusion protein corresponding to amino acids 1301-1531 of Topo II α of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

Topo II α (1301-1531) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 50 μ g purified protein in PBS containing 5 mM DTT and 50% glycerol.

APPLICATIONS

Topo II α (1301-1531) is suitable as a substrate for CKII: sc-4808 and as a Western blotting control for sc-5346, sc-5347, sc-5348 and sc-13058.

RESEARCH USE

For research use only, not for use in diagnostic procedures.