**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 IIα and Topo IIβ. Topo IIα and Topo IIβ 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.

**CHROMOSOMAL LOCATION**

Genetic locus: TOP2B (human) mapping to 3p24.2; Top2b (mouse) mapping to 117 K-207 K -14 K -95 K -49 K -20 K -48 K -117 K -95 K -49 K -20 K of human origin by Western Blotting (starting dilution 1:200, dilution range 1:50-1:500), immunoprecipitation (1 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

**APPLICATIONS**

Topo IIβ (H-286) is recommended for detection of Topo IIβ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Topo IIβ (H-286) is also recommended for detection of Topo IIβ in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Topo IIβ siRNA (h): sc-36697, Topo IIβ siRNA (m): sc-36698, Topo IIβ shRNA Plasmid (h): sc-36697-SH, Topo IIβ shRNA Plasmid (m): sc-36698-SH, Topo IIβ shRNA (h) Lentiviral Particles: sc-36697-V and Topo IIβ shRNA (m) Lentiviral Particles: sc-36698-V.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**SOURCE**

Topo IIβ (H-286) is a rabbit polyclonal antibody raised against amino acids 1341-1626 of Topo IIβ of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**RESEARCH USE**

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

**DATA**

Try Topo IIβ (A-12): sc-365071 or Topo IIβ (B-6): sc-365952, our highly recommended monoclonal alternatives to Topo IIβ (H-286).

**SELECT PRODUCT CITATIONS**