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- Expressversand

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# Topo III $\beta$ (m): 293T Lysate: sc-124216

## BACKGROUND

DNA topoisomerases are nuclear enzymes that regulate the topological structure of DNA by transiently breaking and rejoining DNA strands. Although DNA topoisomerase I (Topo I) and Topo II relax both positive and negative supercoils, Topo III relaxes only negative supercoils. Topo III $\alpha$  exists as a long and a short isoform, which are produced by alternative splicing. Topo III $\alpha$ , which localizes to the nucleolus, is constitutively expressed and remains at high levels throughout the cell cycle in HL-60 cells. Topo III $\beta$  exists as three isoforms,  $\beta$ -1,  $\beta$ -2 and  $\beta$ -3, also produced by alternative splicing. Topo III $\beta$ -1 is expressed in testis, heart, and skeletal muscle, whereas Topo III $\beta$ -2 is expressed in thymus, kidney and pancreas.

## REFERENCES

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3. Hanai, R., Caron, P.R. and Wang, J.C. 1996. Human Top3: A single-copy gene encoding DNA topoisomerase III. *Proc. Natl. Acad. Sci. USA* 93: 3653-3657.
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## CHROMOSOMAL LOCATION

Genetic locus: Top3b (mouse) mapping to 16 B1.

## PRODUCT

Topo III $\beta$  (m): 293T Lysate represents a lysate of mouse Topo III $\beta$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

Topo III $\beta$  (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Topo III $\beta$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

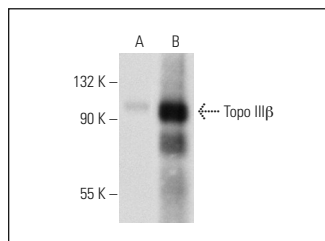
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Topo III $\beta$ -1 (B-10): sc-137238 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Topo III $\beta$  expression in Topo III $\beta$  transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Topo III $\beta$ -1 (B-10): sc-137238. Western blot analysis of Topo III $\beta$  expression in non-transfected: sc-117752 (A) and mouse Topo III $\beta$  transfected: sc-124216 (B) 293T whole cell lysates.

## RESEARCH USE

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