

# Human Topoisomerase II beta



## Product Description (Product Numbers HTB201, HTB205, HTB210 and HTB220)

Human topoisomerase II beta is prepared by overexpressing the enzyme in baculovirus-infected insect cells (*Spodoptera frugiperda*) and purifying it by methods developed in-house. The enzyme is supplied at a minimum concentration of 10 U/ $\mu$ l in Dilution Buffer .

Store at -80 °C.

It is recommended that the enzyme is aliquoted to avoid repeated freeze-thaw cycles.

**For *in vitro* laboratory research use only.**

### Dilution Buffer

50 mM Tris.HCl (pH 7.5)  
100 mM NaCl  
1 mM DTT  
0.5 mM EDTA  
50 % (v/v) glycerol  
50  $\mu$ g/ml albumin

### Assay Buffer (supplied as 10X stock)

50 mM Tris.HCl (pH7.5)  
125 mM NaCl  
10 mM MgCl<sub>2</sub>  
5 mM DTT  
100  $\mu$ g/ml albumin

### ATP (30X stock)

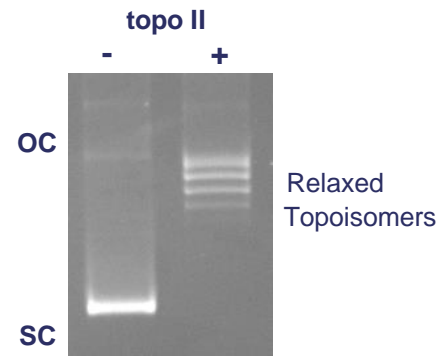
30 mM ATP

### Relaxation Assay

A typical reaction will contain 3  $\mu$ l of (10x) Assay Buffer, 1  $\mu$ l of (30x) ATP, 0.5  $\mu$ l of supercoiled pBR322 (1  $\mu$ g/ $\mu$ l), plus human topo II, in a total volume of 30  $\mu$ l.

1 U of human topo II will relax 0.5  $\mu$ g of supercoiled pBR322 when incubated in 1X Assay Buffer plus 1 mM ATP in a total reaction volume of 30  $\mu$ l at 37 °C for 30 minutes.

Gels should be run in the absence of ethidium bromide or chloroquine (CQ).



### Quality Control

1) Purity: Human topoisomerase II is purified to > 95 % purity as judged by SDS-polyacrylamide gel electrophoresis. 2) Tests for human topoisomerase I contamination by looking for relaxation of sc pBR322 under topoisomerase I assay conditions were negative. 3) kDNA or pBR322 were also incubated for 4 hrs in assay buffer (+ 10 mM MgCl<sub>2</sub>) at 37 °C. These tests were negative for the formation of linear products, showing the absence of nuclease contamination.