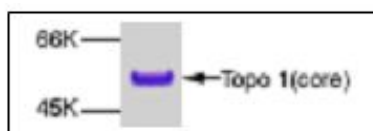


Topo I Core

Human DNA Topoisomerase I, Core Domain

human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-737	5 µg



For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl, pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20 % glycerol.

Activity

1-10 ng are sufficient for *in vitro* reconstituted relaxation assay in a 20 µl reaction and contain no detectable DNA relaxation activity by itself.

Molecular Weight

52 kDa

Purity

> 95% by SDS-PAGE.

Description

Human DNA Topoisomerase I is the best studied of the DNA topoisomerase family. It catalyzes the relaxation of both positive and negative supercoils without the requirement of energy. In addition to DNA replication and transcriptional activation, DNA Topoisomerase I also plays a major role in pre-mRNA splicing, cell cycle, and other gene regulatory pathways during cell growth and development.

The core domain expanded from amino acids 215 to 636 is highly conserved and retains DNA binding activity. The substrate specificity of Topo I has been found to nick the DNA with a preference of 5'-(A/T)(G/C)(A/T)T-3'. Camptothecin and its analogs have been tested as potent anticancer compounds by stabilizing Topo I-DNA complex, thereby inhibiting both DNA and RNA synthesis.

The core domain of DNA Topoisomerase I protein (residues 197-651) was expressed in baculovirus system and purified by using an affinity column and FPLC chromatography.

Purified core domain of Topo I can be used for DNA binding and protein-protein interaction assays. It can be also reconstituted with the C-terminal domain to restore the DNA relaxation activity *in vitro*.

Selected References:

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