# Topoisomerase II Drug Screening Kit

Topoisomerase II inhibitors have been shown to possess effective antibacterial, antiviral and anticancer activity. Identification of topo II inhibitors and antagonists requires tractable biochemical assays employing purified enzyme. The TopoGEN Drug Screening Kit contains the reagents necessary to screen for agents that affect enzymatic activity. To allow the customer maximum flexibility, purified topoisomerase II may be purchased separately from the kit (Prod. No. TOP-2000H).

This kit will allow detection of two kinds of topoisomerase inhibitors: those that stimulate formation of cleavable complexes and those that antagonize topoisomerase (topo) II action on the DNA. A known topo II poison is included as a control. The DNA substrate (pHOT1) included in this assay is ideal for these studies because it contains a single, high affinity topo II cleavage and recognition site. Topo II cuts pHOT1 primarily at a single site at the 54 bp of alternating purine/pyrimidine DNA (see Spitzner et al.,1990). Given that cleavage analyses require larger amounts of enzyme compared to catalytic assays, it is possible to conserve on enzyme by using a DNA substrate with a high affinity site. The assay system is based upon evaluating the formation of DNA cleavage products which may be nicked, open circular DNA or linear DNA. The products are then resolved by ethidium bromide gel electrophoresis as described in the kit.

## Ordering Information

Order Online »

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|---|---|
| **TOP-TG1009-2** | 250 assays |

## Manuals, SDS & CofA

View Online »

## Handling & Storage

**Use/Stability** The DNAs should be stored at 4°C and the buffers stored at -20°C upon receipt. The VP-16 can be stored at ambient temperature.

**Short Term Storage** +4°C

**Long Term Storage** -20°C

**Shipping** Ambient Temperature

## Regulatory Status

RUO - Research Use Only

## Product Details

**Contents**

Kit Contents: (representative of 100 assay kit size)
-Supercoiled pHOT1 DNA 25µg in 100µl
-Marker DNA, Linear pHOT1; 0.05µg/µl in 1X gel loading buffer
-10X Topoisomerase II assay buffer components*
*NEW: To improve stability, the 10X Topo II Assay buffer is provided as two components: Buffer A
(no ATP) and Buffer B (ATP). The complete 10X Assay buffer is made fresh each time by combining
Buffer A and B.
-Sodium dodecyl sulfate (10%), 300µl
-10X Gel loading buffer, 300µl (bromophenol blue, glycerol)
-Control inhibitor, Etoposide (lyophilized) Prod. No. TOP-4140
-Proteinase K (500µl) at 0.5mg/ml. This is a 10X stock of Proteinase K.
-Detailed instruction manual
Note: Enzyme is sold separately (Prod. No. TOP-2000H)

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