

S. aureus Topoisomerase IV Decatenation Kit



Product Description (Product Numbers SAD4001 and SAD4002)

S. aureus topoisomerase IV is purified after heterologous expression in *E. coli* and is supplied as a complex of the subunits. The enzyme is supplied at a concentration of 10 U/ μ 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 (1X)

50 mM Tris.HCl (pH 7.5)
1 mM DTT
1 mM EDTA
40 % (w/v) glycerol

Assay Buffer (supplied as 5X stock)

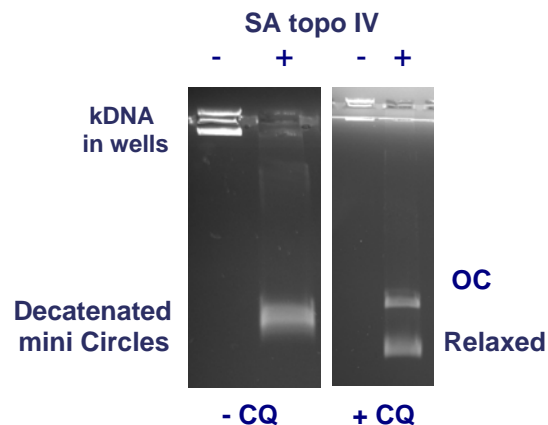
50 mM Tris.HCl (7.5)
5 mM MgCl_2
5 mM DTT
1.5 mM ATP
350 mM potassium glutamate
0.05 mg/ml albumin

DNA Storage Buffer

10 mM Tris.HCl (pH 7.5)
1 mM EDTA

Decatenation Assay

1 U of topoisomerase IV will decatenate 200 ng of kDNA when incubated in 1X Assay Buffer in a total reaction volume of 30 μ l at 37°C for 30 minutes. Gels are run in the absence of Ethidium Bromide or Chloroquine.



Quality Control

1) Purity: *S. aureus* topo IV is purified to $> 95\%$ purity as judged by SDS-polyacrylamide gel electrophoresis. 2) pBR322 was also incubated for 4 hrs in assay buffer + 10 mM MgCl_2 at 37°C . These tests were negative for the formation of linear products, indicating the absence of nuclease contamination. (3) No activity was detectable when the single subunits were assayed alone.