and expressed gyrA and gyrB genes. An E. coli strain containing the cloned (90 kDa) subunits.

Source:

ATP. The gyrase holoenzyme is a heterotetramer of negative supercoils in DNA in the presence of topoisomerase that catalyzes the introduction of DNA Gyrase (E. coli) Substrate (NEB #N0471) to > 95% of 0.5 µg of supercoiled plasmid in a total reaction volume of 30 µl in 30 minutes at 37°C. DNA supercoiling is assessed by agarose gel electrophoresis in the absence of ethidium bromide.

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Survival in a Reaction: A minimum of 0.13 unit is required to convert 0.5 µg of substrate DNA to supercoil plasmid in a total reaction volume of 30 µl in 16 hours.

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Quality Control Assays: 16-Hour Incubation: A 50 µl reaction containing 1 µg of λDNA (HindIII digest) and 25 units of DNA Gyrase (E. coli) for 16 hours at 37°C resulted in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Endonuclease Activity: Incubation of 25 units of DNA Gyrase (E. coli) with 1 µg pUC19 DNA for 4 hours at 37°C in 50 µl reaction buffer resulted in < 10% conversion to RF II.

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Heat Inactivation: 25 units of DNA Gyrase (E. coli) were inactivated by incubation at 65°C for 20 minutes.

Note: The 5X DNA Gyrase Reaction Buffer should be stored at –70°C to maintain optimal stability of components.

References:


Companion Product:
DNA Gyrase (E. coli) Substrate #N0471S 20 µg

M0306S
100 units Lot: 0021407 Exp: 7/15
5,000 U/ml Store at –70°C

Description: DNA Gyrase (E. coli) is a Type II topoisomerase that catalyzes the introduction of negative supercoils in DNA in the presence of ATP. The gyrase holoenzyme is a heterotetramer made up of 2 gyrA (97 kDa) subunits and 2 gyrB (90 kDa) subunits.

Source: An E. coli strain containing the cloned and expressed gyrA and gyrB genes.

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