

User Manual

Version 4.0

Product name: *E.coli* SSB

Cat #: ESSB-100, ESSB-200, ESSB-OEM

Description:

Single-Stranded DNA Binding Protein (SSB) preferentially binds single-stranded DNA, forming a tetramer of four identical 18.9 kDa subunits which protects 8-16 nucleotides, while not binding well to double-stranded DNA. In nature, SSB participates in DNA replication, recombination, and repair functions. In vitro, SSB has been found to stimulate certain DNA polymerase-mediated reactions by relaxing DNA secondary structure and enhancing enzyme processivity.

Protocol:

SSBs do not unwind dsDNA; rather, they bind and stabilize the ssDNA conformation as it becomes available either enzymatically via helicases or by binding ssDNA 'bubbles' or the transiently frayed 5' or 3' ends of an otherwise duplex DNA.

Assayed by incubating circular single-stranded, linear, or negatively supercoiled DNA for 1 h at 37°C. Approximately 5 µg of SSB protein is required to prevent optical density change of 1 µg of single-stranded DNA upon addition of 10mM MgCl₂.