



6143 North 60th Street
Milwaukee, WI 53218
www.chimerx.com

Certificate of Analysis

Telephone: (414) 535-9506
Toll Free: (800) 626-7833
Fax: (414) 535-9508
Web Support: chimerx.com/support
Email: info@chimerx.com

Single-stranded DNA Binding Protein (*E. coli*)

Catalog No: 4200

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Storage Conditions: Store at -20°C

Description

- Single-stranded specific DNA binding protein (1)
- Helix destabilizing protein (1)
- Ultrapure recombinant protein

Applications

- Reduces formation of secondary DNA structures
- Prevents degradation of single stranded DNA by nucleases
- Prevents inhibition of PCR by template DNA contaminants (2)
- Improves efficiency of DNA amplification by Taq DNA Polymerase (3,4,5,6)
- Replaces Hot Start method by assembling PCR reactions (4,7)
- Stabilizes single-stranded regions of DNA for site-specific mutagenesis
- Aids completion of restriction enzyme digestion
- Improves efficiency of DNA synthesis by T4 DNA Polymerase (8)
- Enhances fidelity of modified T4 DNA Polymerase (8)

Storage Buffer

20 mM Tris-HCl (pH 8.0 @ 22°C)
500 mM NaCl
0.2 mM EDTA
1 mM dithiothreitol
50 (v/v) glycerol

Quality Control

Nicking: Incubation of 1, 2, and 4 µg of protein with 1.0 µg of pBR322 DNA at 37°C for 1 hour resulted in ≤5% conversion of RF I to RF II DNA. Reaction volume of 50 µl.

Purity: >98% pure, as judged by SDS-polyacrylamide gel electrophoresis.

Note: All lots are assayed for contaminating 3' and 5' exonuclease activity.

References

- (1) Greipel, J. Urbanke, C. and Maass, G. (1989) in: Saenger, W., Heinemann, U. (Eds.) pp. 61-86
- (2) Kreader, C.A. (1996) *Applied Environ. Micro.* 62, 1102-1106
- (3) Dąbrowski, S., Olszewski, M., Piątek, R. and Kur, J. (2002) *Protein Expr. Purif.* 26, 131-138
- (4) Dąbrowski, S. and Kur, J. (1999) *Protein Expr. Purif.* 16, 96-102
- (5) Rapley, *Mol. Biotech.* 2 (1994) 295-298
- (6) Schwarz, K., Hansen-Hagge, T. and Bartram, C. (1989) *Nucleic Acids Res.* 18, 1079
- (7) Barski, P., Piechowicz, L., Galinski, J. and Kur, J. (1996) *Mol. Cell Probes* 10, 471-475
- (8) Sandhu, D.K. and Keohavong, P. (1994) *Gene* 144, 53-58.

For more information or to re-order, please visit www.chimerx.com