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Certificate of Analysis

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Taq Single-stranded DNA Binding Protein

Catalog No: 4300

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Storage Conditions: Store at -20°C

Description

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

Applications

- Reduces formation of problematic 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)
- Improves the specificity and selectivity of multiplex PCR (7)
- Stabilizes single-stranded regions of DNA for site-specific mutagenesis
- Aids PCR of difficult GC-rich templates
- Aids completion of restriction enzyme digestion

Storage Buffer

10 mM Tris-HCl (pH 7.5 @ 22°C)
50 mM NaCl
5 mM β -mercaptoethanol
0.1 mM EDTA
0.05% Igepal
50 (v/v) glycerol

Quality Control

All preparations are assayed for contaminating endonuclease, 3'- and 5'-exonuclease activities. Typical preparations are greater than 95% pure, as judged by SDS polyacrylamide gel electrophoresis.

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