

Single-Stranded DNA Binding Protein (SSB)

Cat. No. SSB02200

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1. Introduction

Single-Stranded DNA Binding Protein (SSB) binds single-stranded DNA with high specificity^{1,2}. *In vivo*, the protein is involved in DNA replication, recombination, and repair. *In vitro*, SSB enhances several molecular biology applications by destabilizing DNA secondary structure and increasing the processivity of polymerases.

Applications

- Improve restriction endonuclease digests and restriction endonuclease digests in the presence of single-stranded DNA.³
- Enhance the specificity and yield of PCR reactions.⁴
- Improve DNA sequencing results through regions with strong secondary structure.⁵
- Site-directed mutagenesis when used in conjunction with *recA* protein.⁶
- Improve the processivity of DNA polymerases.
- DNA replication and recombination studies.

2. Product Specifications

Storage: Store only at -20°C in a freezer without a defrost cycle.

Storage Buffer: SSB is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1mM EDTA 1.0 mM dithiothreitol, and 0.1% Triton® X-100.

Quality Control: SSB binding activity is tested in a gel retardation assay using single-stranded M13mp18 DNA.

Contaminating Activity Assays: SSB is free of detectable DNA exonuclease, endonuclease, and ribonuclease activities.

3. Kit Contents

Desc.	Quantity
Single-Stranded DNA Binding Protein:	
SSB02200	200 µg
Supplied at a concentration of 2 mg/ml.	

4. Related Products

The following products are also available:

- *recA* Protein

5. References:

1. Krauss, G. *et al*, (1981) *Biochemistry* **20**, 5346.
2. Weiner, J.H. *et al*, (1975) *J. Biol. Chem.* **250**, 1972.
3. Milavetx, B. (1989) *Nucl. Acids Res.* **17**, 3322.
4. Schwarz, K. *et al*, (1990) *Nucl. Acids Res.* **18**, 1079.
5. Kowalczykowski, S.C. *et al*, (1981) *The Enzymes*, 3rd edition, Academic Press, N.Y., N.Y. **14**, 373.
6. Shortle, D. (1980) *Proc. Natl. Acad. Sci. USA* **69**, 3537.

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