



## **T4 Gene 32 Protein (Single-stranded DNA Binding Protein, SSB)**

### **BACKGROUND**

**T4 gene 32 protein** is a single-stranded DNA binding protein from phage T4 which binds to single-stranded DNA with high specificity (1, 2). It is involved in DNA replication and recombination. The T4 phage-derived **SSB** gene was expressed in *E.coli* and the protein was highly purified. MW is 33.5 kDa.

**Applications:** 1) Promoting DNA replication and recombination by stabilizing single-stranded DNA (1)  
2) Increase specificity and yields of long PCR products (3)

**Size:** 1 mg

**Form:** 10 mg/ml in 20mM Tris-HCl (pH 8.0), 100mM NaCl, 0.5mM dithiothreitol, 1mM EDTA, 50% glycerol

**Quality Assurance:** Greater than 95% of protein determined by SDS-PAGE (CBB staining)  
The absence of endonucleases and exonucleases was confirmed.

**Data Link:** UniProtKB/Swiss-Prot [P03695](#) (VHED\_BPT4)

**Storage:** Store at -20°C

**References:** 1) Alberts BM & Frey L (1970) "T4 bacteriophage gene 32: a structural protein in the replication and recombination of DNA". *Nature* **227**:1313-1318 PMID:[5455134](#)  
2) Bittner M *et al* (1979) "Purification of the T4 gene 32 protein free from detectable deoxyribonuclease activities" *J Biol Chem* **254**: 9565-9572 PMID:[226522](#)  
3) Schwarz K *et al* (1990) "Improved yields of long PCR products using gene 32 protein" *Nucleic Acids Res* **18**:1079 PMID:[2107527](#)

### **Related Products**

BAM-02-042-EX	E.coli SSB protein
BAM-02-044-EX	Taq SSB

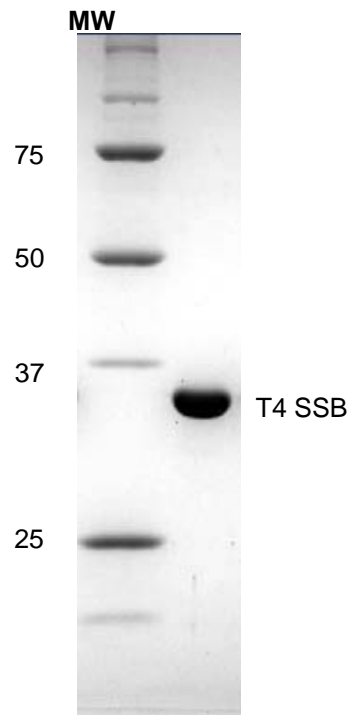
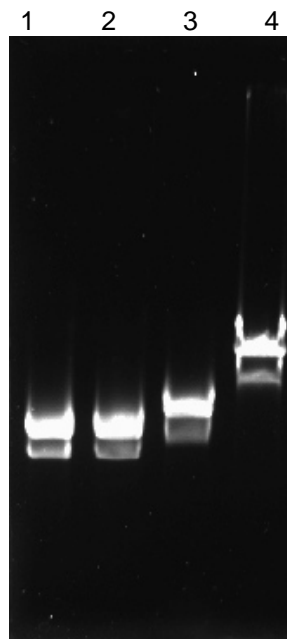


Fig.1 SDS-PAGE of T4 SSB protein



0.02 ug/ul of M13mp18ssDNA was incubated with 0(lane0), 0.025 (lane1), 0.05 (lane2), and 0.1 (lane3) ug/ul of SSB at 37°C for 30 min and then 10 ul aliquot was subjected to electrophoresis in agarose.

Fig.2 Binding activity to single-stranded DNA

*For research use only. Not for clinical diagnosis.*

Manufactured by BioAcademia, Inc.



COSMO BIO CO., LTD.  
Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

[http://www.cosmobio.co.jp/index\\_e.asp](http://www.cosmobio.co.jp/index_e.asp)

Phone : +81-3-5632-9617

E-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

FAX : +81-3-5632-9618