

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

02-040 200 µg # 02-040-5 1 mg

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)

Specification

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

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

Storage: -20°C

Data Link: UniProtKB/Swiss-Prot [P03695](https://www.uniprot.org/uniprot/P03695) (VHED_BPT4)

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](https://pubmed.ncbi.nlm.nih.gov/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](https://pubmed.ncbi.nlm.nih.gov/226522/)
3. Schwarz K et al (1990) "Improved yields of long PCR products using gene 32 protein" *Nucleic Acids Res* 18:1079 PMID:[2107527](https://pubmed.ncbi.nlm.nih.gov/2107527/)

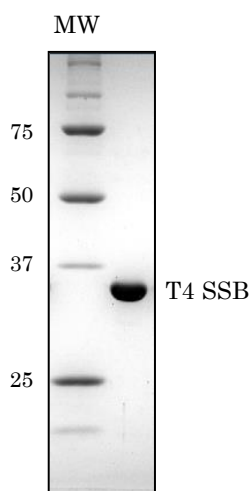


Fig. 1 SDS-PAGE of T4 SSB protein

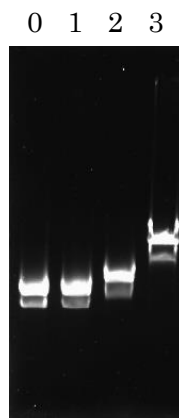


Fig. 2 Binding activity to single-stranded DNA

0.02 ug/ul of M13mp18ssDNA was incubated with 0 (lane 0), 0.025 (lane 1), 0.05 (lane 2), and 0.1 (lane 3) ug/ul of SSB at 37°C for 30 min and then 10 ul aliquot was subjected to electrophoresis in agarose.

Related product: #02-042 *E. coli* SSB protein, #02-044 Taq SSB

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