

***Thermus aquaticus* SSB (Single-stranded DNA Binding) Protein**

Product code	02-044
Size	100 µg
Storage	-20°C
Product Description	<i>Thermus aquaticus</i> SSB gene was expressed in <i>E.coli</i> in large quantities and the protein was highly purified. MW is 30.0 kDa, same as that of the natural protein.
Concentration	1.0 mg/ml
Buffer	50mM Tris-HCl (pH 8.0), 200mM NaCl, 0.1mM dithiothreitol, 0.5mM EDTA, 50% glycerol
Purity	Greater than 95% of protein determined by SDS-PAGE (CBB staining) The absence of endonucleases and exonucleases was confirmed.
Biochemical Activity	Single-stranded DNA binding activity was confirmed (Fig.2).
Application	Stabilizes single-stranded DNA in DNA replication, repair, and recombination.
Special notes	N/A
Background	<i>Thermus aquaticus</i> derived single-stranded DNA binding protein (SSB) is a thermostable protein which binds to single-stranded DNA with high specificity but does not bind well to double-stranded DNA (1). It plays important roles in DNA replication and recombination (2).
Data Link	UniProtKB/Swiss-Prot Q9KH06 (SSB_THEAQ)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 02-044 *Thermus aquaticus* SSB (Single-stranded DNA Binding) Protein

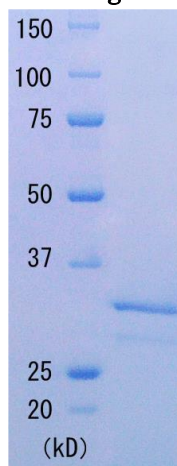


Fig.1 SDS-PAGE of *Thermus aquaticu*

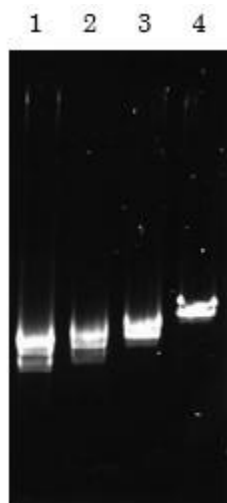


Fig.2 Binding activity to single-stranded DNA

0.02 $\mu\text{g}/\mu\text{l}$ of M13mp18ssDNA was incubated with 0 (lane 1), 0.025 (lane 2), 0.05 (lane 3), and 0.1(lane 4) $\mu\text{g}/\mu\text{l}$ of SSB at 37°C for 30 min and then 10ul aliquot was subjected to electrophoresis in agarose.

Reference: This protein was described and used in the following publication.

1. Dabrowski,S. *et al.* (2002) "Novel thermostable ssDNA-binding proteins from *Thermus thermophilus* and *T. aquaticus*-expression and purification." *Protein Expr Purif.* **26**: 131-138
PMID: [12356480](https://pubmed.ncbi.nlm.nih.gov/12356480/)
2. Greipel,J. *et al.* (1989) In Saenger,W. and Heinemann,U.(eds), Protein-Nucleic Acid Interaction, Macmillan, London, pp.61-86.

Related Products:

- 02-040 T4 SSB (gene 32) protein
- 02-042 *E.coli* SSB protein