

Thermus aquaticus Single-stranded DNA Binding Protein (SSB)

02-044 100ug

Thermus aquaticus 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). Thermus aquaticus SSB gene was expressed in E.Coli in large quantities and the protein was highly purified. MW is 30.0 kDa, same as that of the natural protein.

Applications:

Stabilizes single-stranded DNA in DNA replication, repair, and recombination

Storage conditions:

50mM Tris-HCl (pH 8.0), 200mM NaCl, 0.1mM dithiothreitol, 0.5mM EDTA, 50% glycerol Store at -20°C

Activity:

Single-stranded DNA binding activity was confirmed (Fig.2).

Concentration:

0.5 mg/ml

Quality Assurance:

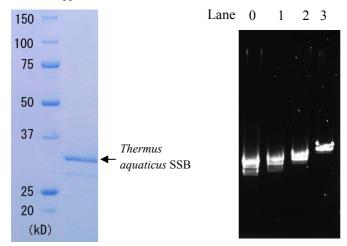
Greater than 95% of protein determined by SDS-PAGE (CBB staining)

The absence of endonucleases and exonucleases was confirmed.

Data Link: UniProtKB/Swiss-Prot Q9KH06 (SSB THEAQ)

References:

- 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
- Greipel J et al (1989) In Saenger, W. and Heinemann, U.(eds), Protein-Nucleic Acid Interaction, Macmillan, London, pp.61-86



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 10ul aliquot was subjected to electrophoresis in agarose.

Fig1.SDS-PAGE of Thermus aquaticus SSB

Fig.2 Binding activity to single-stranded DNA

Related products: #02-040 T4 SSB, #02-042 E.coli SSB