

Thermus aquaticus Single-stranded DNA Binding Protein (SSB)

02-044

μg

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

Activity:

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

Concentration:

0.5 mg/ml

Quality Assurance:

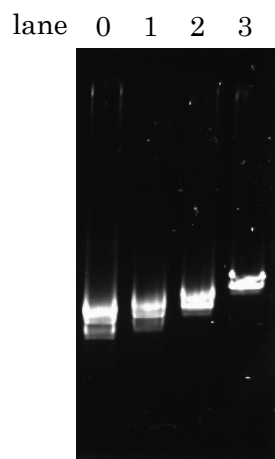
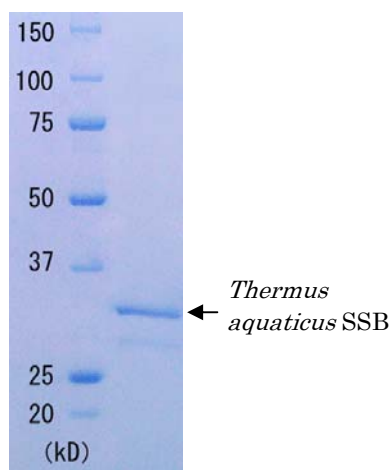
Greater than 95% of protein determined by SDS-PAGE (CBB staining)

The absence of endonucleases and exonucleases was confirmed.

Data Link: Swiss-Prot [Q9KH06](#)

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



0.02 μg/μl of M13mp18ssDNA was incubated with 0(lane0), 0.025(lane1), 0.05(lane2), and 0.1(lane3) μg/μl of SSB at 37 for 30 min and then 10μl 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