

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

02-044 100 ug

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 purified. MW is 30.0 kDa, same as that of the natural protein.

Application

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

Specification

Concentration: 1.0 mg/ml in 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).

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

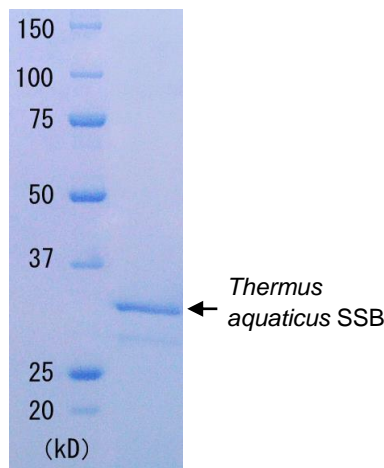
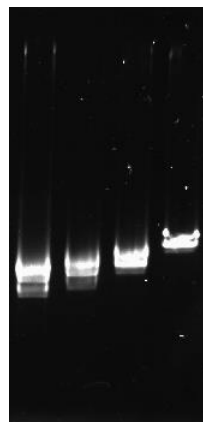


Fig. 1 SDS-PAGE of *Thermus aquaticus* SSB

Lan 0 1 2 3



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.

Fig. 2 Binding activity to single-stranded DNA

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

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