## SUPPLEMENTAL DATA

## FIGURE LEGENDS

**Figure S1. SDS-PAGE of variants of *Hs*mtSSB.** Near-homogeneous fractions (~1 μg) of recombinant *Hs*mtSSBwt (*lane 2*), loop12 (*lane 3*), loop23 (*lane 4*), α1 (*lane 5*), loop45-1 (*lane 6*), and loop45-2 (*lane 7*) were subjected to SDS-PAGE in a 17% gel, followed by Coomassie blue staining. *E. coli* SSB (~1 μg; USB® Molecular Biology Reagents and Biochemicals) is shown in *lane 1* for comparison. The smear below the *Hs*mtSSB protein bands is an artifact in the SDS-PAGE analysis that has been observed previously, and is not apparent each time the same sample is analyzed (4,5). The sizes of molecular mass markers (BenchMark™ Pre-Stained Protein Ladder, Invitrogen™) are indicated in kDa at *left*.

**Figure S2. Variants of *Hs*mtSSB form tetramers in solution.** Recombinant *Hs*mtSSBwt and *Hs*mtSSB variants were sedimented in preformed 12-30% glycerol gradients as described (4), and fractions were subjected to SDS-PAGE in a 17% gel, followed by Coomassie blue staining. Standard protein markers (*inset panel*) used were: bovine serum albumin (BSA, 4.85 *S*), carbonic anhydrase (CA, 3.23 *S*), and lysozyme (LYS, 1.91 *S*). The *S* value determined for all *Hs*mtSSB proteins was 4.3.

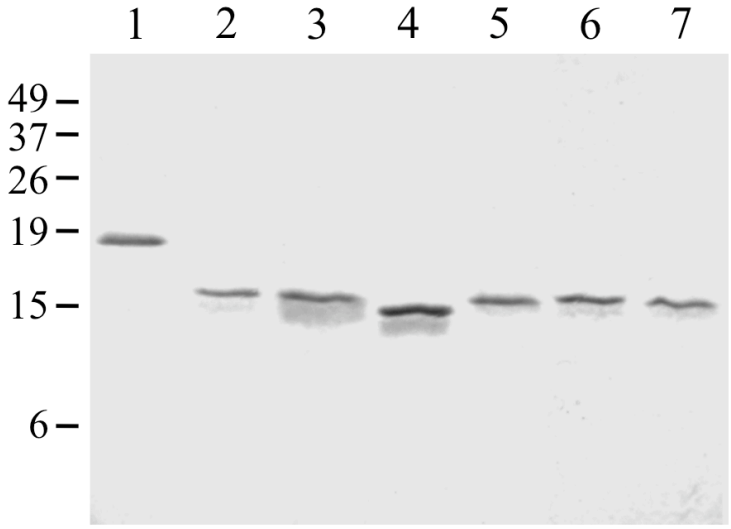


Figure S1

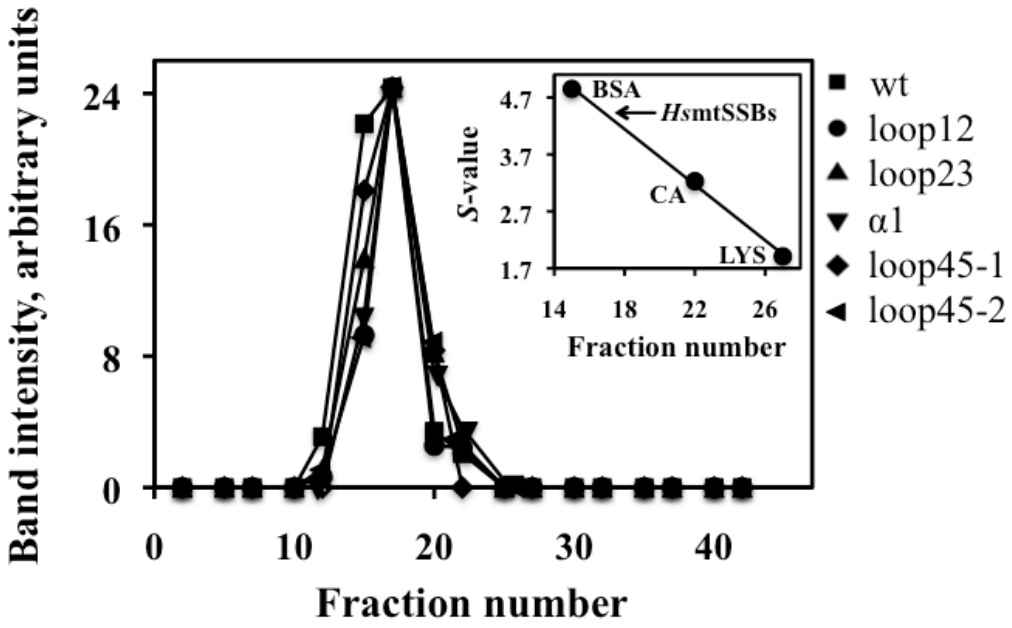
Band intensity, arbitrary units
24
16
8
0
0
10
20
30
40
Fraction number
wt
loop12
loop23
α1
loop45-1
loop45-2
BSA
HsmtSSBs
CA
LYS
S-value
4.7
3.7
2.7
1.7
14
18
22
26
Fraction number

Figure S2