

SUPPLEMENTAL FIGURE LEGENDS

Supplemental Fig. 1 Characterization of an additional RPA1-like predicted protein in *T. thermophila*.

A, Comparison of *T. thermophila* Rpa1 and the RPA1-like protein Rlp1. Amino acid identity (ID) and additional similarity (SIM) determinations within the predicted OB-fold domains were performed using ClustalW. The GenBank accession number for the confirmed mRNA of *RLP1* is GU384877.

B, *RLP1* knockout (KO) strains. A Southern blot of digested genomic DNA from four clonally isolated cell lines disrupted for *RLP1* is shown. The wild-type gene restriction fragment (WT) is entirely replaced by the restriction fragment from gene disruption with the selectable marker cassette (*neo2*). The fragment labeled "bg" is from background non-specific hybridization.

Supplemental Fig. 2. Product dissociation profiles for Teb1^{FL} and Teb1^{C} holoenzymes.

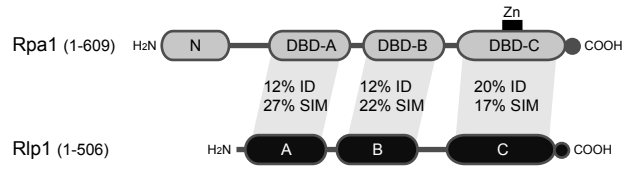
The intensities of products ending in TT-3' or TTG-3' from each repeat synthesis were quantified separately, normalized for content of radiolabeled dGTP, and then summed to represent the total product. Relative molar amount of product is plotted on a log scale. Number of G-tracts includes primer sequence.

A, Quantification of product profiles for reactions from Fig. 5A, using the two 40 minute reaction time points. Reactions contained final concentrations of 0.3 μM dGTP, 200 nM $(\text{GT}_2\text{G}_3)_3$, and 200 nM of the indicated form of Teb1 .

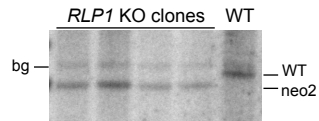
B, Quantification of product profiles for reactions from Fig. 5B, comparing the $(\text{GT}_2\text{G}_3)_3$ and $\text{NT6}(\text{T}_2\text{G}_4)_3$ primers with sequences shown in Fig. 5C. Reactions contained final concentrations of 0.3 μM dGTP, 200 nM primer, and 1 μM Teb1^{C} . The higher concentration of Teb1^{C} compared to assays in (*A*) reduced the amount of low-RAP enzyme. Note the minor peak of product dissociation after synthesis of nine repeats, likely resulting from folding of a second G-quadruplex involving repeats five through nine.

Supplemental Figure 1

A

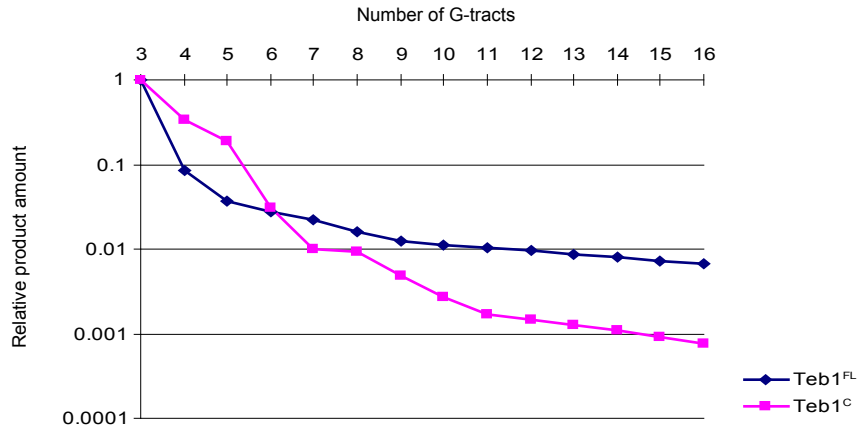


B



Supplemental Figure 2

A



B

