

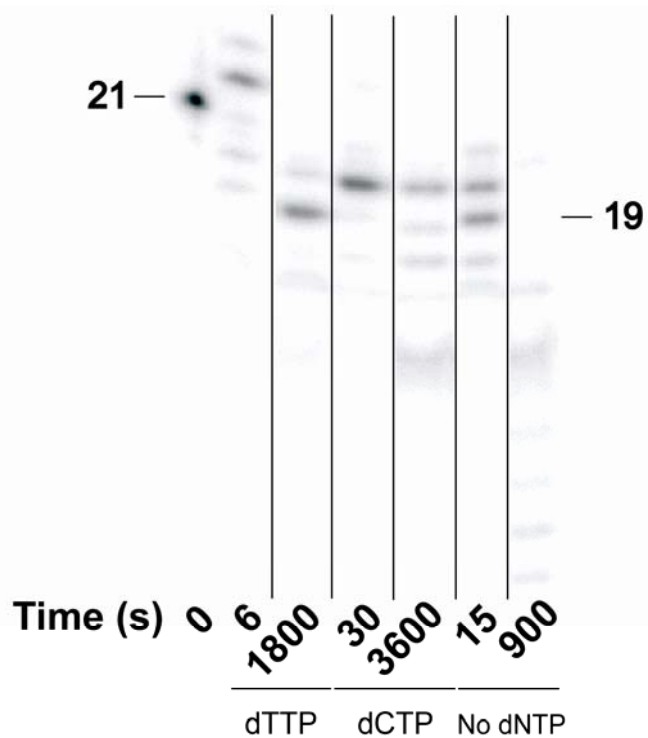
Supporting Information

Polymerization Fidelity of a Replicative DNA Polymerase from the Hyperthermophilic Archaeon *Sulfolobus solfataricus* P2

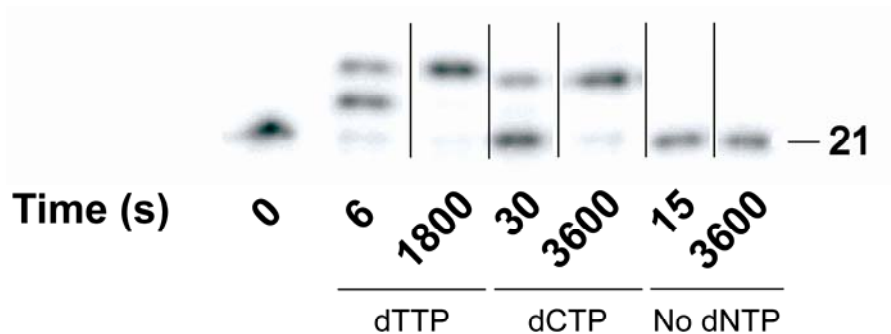
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Supplementary Figure 1

A



B



Supplementary Figure 1. Comparison of polymerase and 3'→5' exonuclease activity for PolB1 enzymes. The enzymatic activities of (A) wild-type PolB1 and (B) PolB1 exo- were examined by pre-incubating the appropriate enzyme (120 nM) with D-1 DNA. The polymerase reaction was

initiated with 50 μM dTTP $\cdot\text{Mg}^{2+}$ (correct) or 50 μM dCTP $\cdot\text{Mg}^{2+}$ (incorrect) in independent reactions while the exonuclease reaction was initiated with 5 mM Mg^{2+} . All reactions were quenched using 0.37 M EDTA at the designated time. Strong exonuclease activity was observed at all time points for wild-type PolB1 except for the 6 s time point in the presence of correct dTTP. In sharp contrast, no degradation was observed for the exonuclease-deficient PolB1 mutant under all reaction conditions tested here.