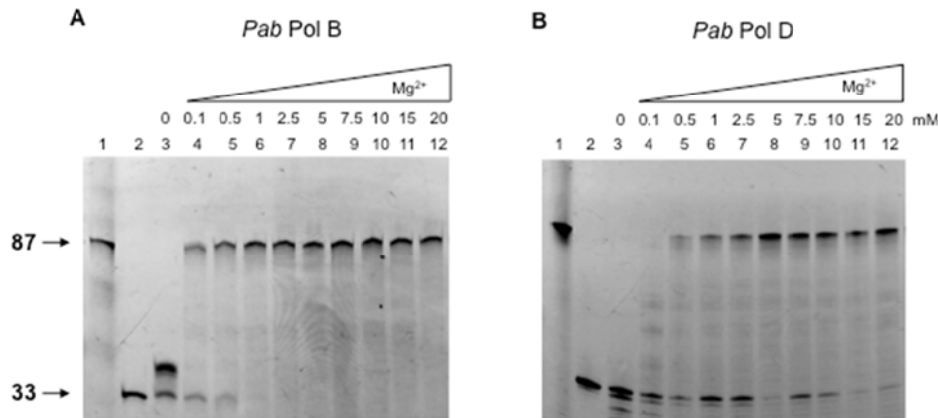
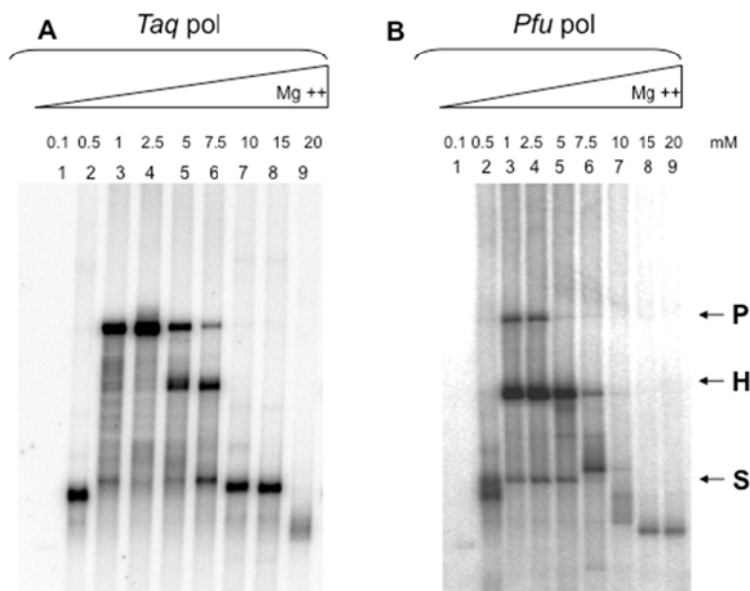


3'-ACGGTTCGACGTACGGACGTCCAGCTGAGATCTCCTAGGGGCCATGGCTCGAGCTTAAGCATTAGTACCAGTATCGACAAAGGAC-5'  
 5'-FAM-TGCCAAGCTTGCATGCCTGCAGGTCGACTCTAG



**Supplementary Figure 1. Effect of magnesium concentration on *Pab* DNA polymerase synthesis efficiency.** Primer extension was measured on a short single-stranded linear DNA template (87 mer) annealed to a 5' fluorescently-labeled primer (33 mer) as shown in Figure 2. Reactions contained 0.5 units (1.35 pmoles) of *PabpolB* (A), 0.05 units of *PabpolD* (4.3 pmoles) (B), and increasing concentrations of  $MgCl_2$ . Lane 1: 87 mer template; Lane 2: 33 mer primer. The reaction products were analyzed on a denaturing 12% polyacrylamide gel.



**Supplementary Figure 2.**

**Effect of magnesium concentration on slippage efficiency during primer extension by *Taq* (A) and *Pfu* (B) DNA polymerases.** Primer extension reactions were carried out with radiolabelled nucleotides as described in the Material and Methods on 25 ng of template at 60 °C. Reactions contained increasing concentrations of  $MgCl_2$  and 0.1 and 0.5 units of *Taq* and *Pfu* DNA polymerases, respectively. Lanes 1-9 contained 0.1, 0.5, 1, 2.5, 5, 7.5, 10, 15 and 20 mM  $MgCl_2$ . P, H and S refer to parental, heteroduplex and stalled molecules, respectively.