Supplement Fig. S1. **Replication activity of polι and polη ubiquitin-binding mutants.**

(A) Both purified GST-polι and GST-polι P692R are able to carry out replication on an undamaged DNA template indicating that the P692R mutation does not effect the catalytic properties of polι.

(B) Both wild-type polη and the H654A mutant are able to replicate past a T-T- CPD, indicating that the H654A mutation does not effect the enzymatic properties of polη. Reaction conditions are described in detail in Supplemental Materials and Methods.