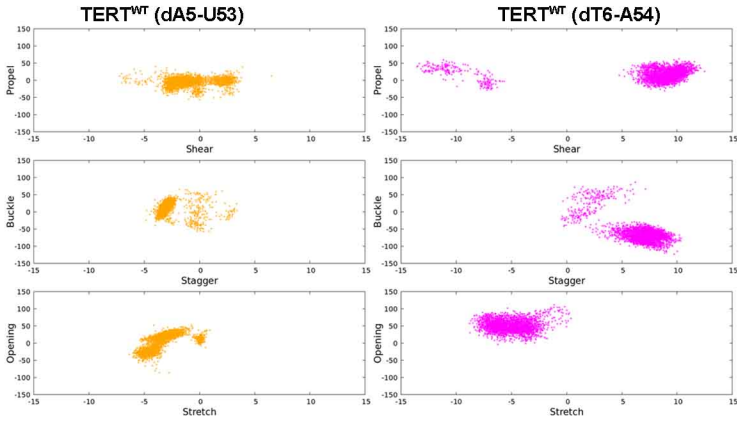
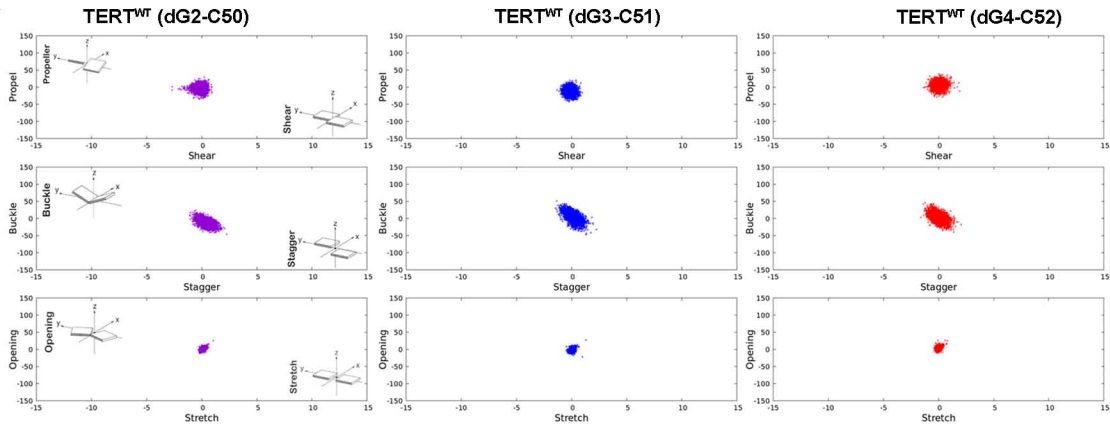
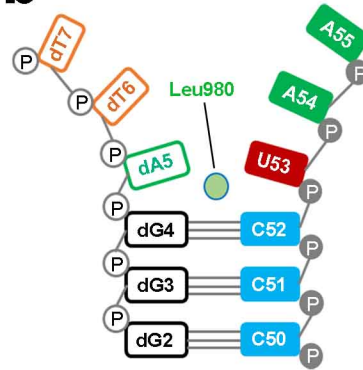
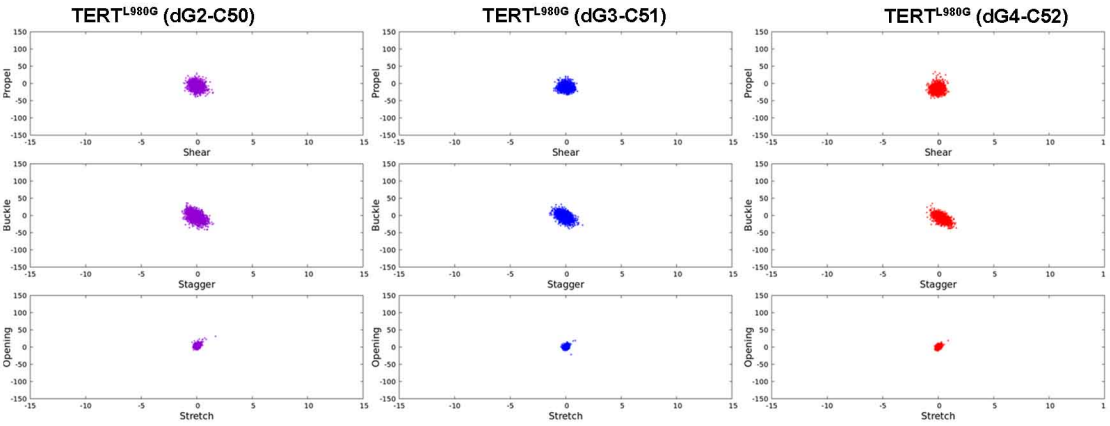
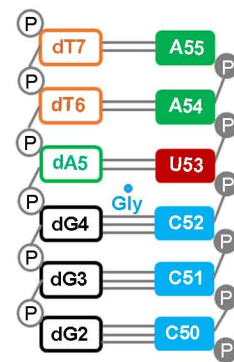


**a****b****c****d**

**Supplementary information, Fig. S8 Molecular dynamic simulation of different base pairs of the primer-template duplex.** **a** Scatter plots of the geometrical base pair descriptors of the primer-template duplex at positions 2 to 6 in WT human telomerase. **b** Schematic diagram of the primer-template duplex in WT human telomerase. The zipper head residue Leu980 is designated as a light green circle. **c** Scatter plots of the geometrical base pair descriptors of primer-template duplex at positions 2 to 6 in TERT<sup>L980G</sup> mutant telomerase. **d** Schematic diagram of the primer-template duplex in TERT<sup>L980G</sup> mutant telomerase. The glycine residue equivalent to Leu980 is designated as a light blue circle.