Supplementary information, Figure S5

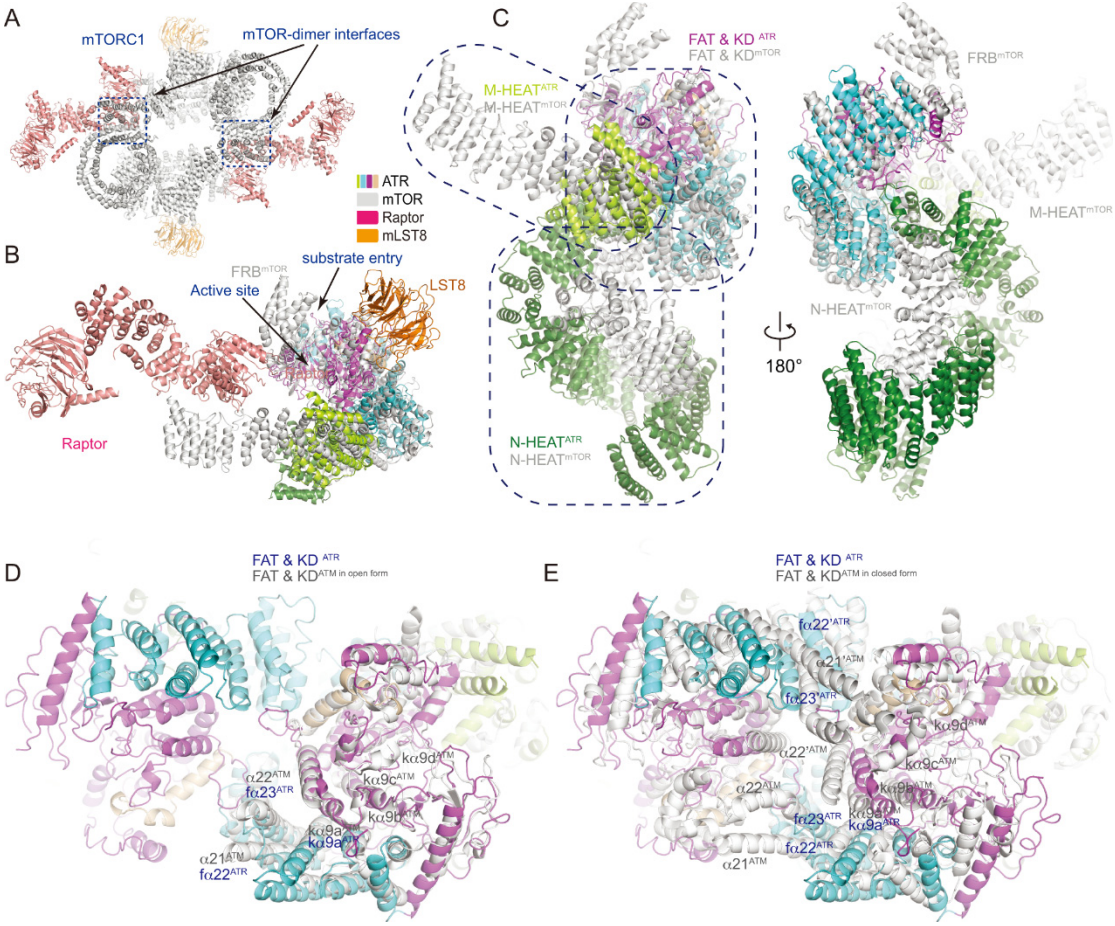

Figure S5 Structural comparison of ATR, mTOR and ATM. (A) Ribbon representations of human mTORC1 complex. Note that the mTOR dimerizes through the interaction between the N-HEAT^{mTOR} and M-HEAT^{mTOR}. (B) Superimposition of the ATR monomer from the ATR-ATRIP complex and mTORC1 complex (on copy of ternary complex, containing one mTOR, one Raptor, and one mLST8). The color scheme is indicated. (C) Superimposition of ATR monomer from the ATR-ATRIP complex and mTOR monomer from the mTORC1 complex in two different views. The core regions (including FAT and kinase domain) were superimposed. Note that ATR lacks FRB domain, and has shorter M-HEAT compared to mTOR. The N-HEAT

domains from ATR and mTOR both form right-handed super-helical α-solenoids, but adopt different overall conformation. (D, E) Superimposition of the ATR and ATM structures in the open form (D) and closed form (E). Critical elements for ATM dimerization and activity regulation, and their equivalents in ATR, are indicated.