



Fig. 8. A schematic presentation describing the adhesive force measurement. (A) The trapped bead is under a confined Brownian motion. (B) The bead is adhered on a single fimbria. (C) and (D) The bead is being pulled away from the trapping center. The farther the displacement of the trapped bead to the trapping center, the larger the trapping force on the bead. (E) The trapping force is larger than the adhesive force so that the bead is detached from the bacterium and trapped back to the trapping center.