

Description of Supplementary Files

File Name: Supplementary Movie 1

Description: Representative transition paths are shown. In the first half, the transition path with Na⁺ bound (yellow sphere) from the inward to outward-open conformation is shown. In the last half, the transition path with H⁺ bound (green sphere) from the outward to inward-open conformation is shown.

File Name: Supplementary Data 1

Description: The asymmetric dimer conformation of PaNhaP obtained by the simulation is provided in PDB format.