## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: CaM-bound and PA<sub>7</sub>-bound EF forms morph. Morph movie, calculated using the "morph conformations" function in UCSF Chimera, of the closed and open states. This morph is not representative of the exact motion of the mechanism, but is intended to give a sense of scale for the dramatic conformational shift.