

Movie S1. An animation of dynein stepping. This animation shows a dynein dimer stepping towards the minus end of a microtubule. It incorporates various aspects of dynein stepping, based largely on data for yeast dynein, as described in detail in the sections entitled “How dynein steps towards the microtubule minus end” and “Dynein stepping: an animation”. The microtubule binding domain (MTBD) is colored darker blue in the strong binding state and light blue in the weak binding state. The linker is colored yellow in the ADP state and red in the ATP state. In addition to depicting these conformational changes, thermal-driven Brownian motion of the detached motor domain and of motor subdomains are depicted. The following PDB files were used in generating this animation: 3JIT, 3VKH, 4RH7, 3WUQ, 3JAL.