

Title: Supplementary Movie 1.

Description: All-atom MD simulation showing the binding of Osh6p Δ 35 to a DOPC/DOPS (70/30) bilayer (Δ 35-1 trajectory). The length of the simulation is 500 ns. The protein is represented in a ribbon mode with the lid (region [35-69]) coloured in red and the α 7 helix in green. The POPS molecule inside the lipid-binding pocket is represented in a sphere mode with carbon in cyan. The side chain of residues that preferentially insert into the membrane is represented in a stick mode with carbon in grey, oxygen in red and nitrogen in blue. Lipids in the membrane are represented in wire mode with carbon in pale blue, oxygen in red, nitrogen in blue and phosphorus in orange. Water molecules are not showed.

Title: Supplementary Movie 2.

Description: The movie corresponds to the Δ 35-2 trajectory (500 ns) during which Osh6p Δ 35 does not bind to the DOPC/DOPS bilayer.

Title: Supplementary Movie 3.

Description: All-atom 500-ns MD simulation showing the binding of Osh6p Δ 69 to a DOPC/DOPS (70/30) bilayer (Δ 69-2 trajectory).

Title: Supplementary Movie 4.

Description: All-atom 500-ns MD simulation of Osh6p Δ 69 in the presence of a DOPC/DOPS (70/30) bilayer (Δ 69-4 trajectory). The protein adopts a docking geometry on the surface of the membrane that is different from the one observed at the end of the Δ 69-1 to 3 trajectories.