

## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **Molecular dynamics simulation of Cj-DLP1/2<sub>tetramer</sub> in solution state.** The structure used to build the model of the Cj-DLP1/2<sub>tetramer</sub> is as shown in Fig. 5c, with G-domain interface contacts additionally included (see Methods). Note that the trunk domains of both Cj-DLP1 molecules have been removed for clarity. The length of Cj-DLP2<sub>linker</sub> is sufficient for G-domain heterodimerisation, where Cj-DLP1<sub>α</sub> G-dimerises exclusively with Cj-DLP2<sub>β</sub>, and Cj-DLP1<sub>β</sub> exclusively with Cj-DLP2<sub>α</sub>. The alternate conformation in which Cj-DLP1<sub>α</sub> G-dimerises with Cj-DLP2<sub>α</sub> was not observed. Since this alternate interface is energetically equivalent in the force field, this means the alternate interface is geometrically occluded. The movement of Cj-DLP1<sub>α</sub> and Cj-DLP1<sub>β</sub> relative to the central Cj-DLP2 dimer allows distantly opposing membranes to be sensed and bound.