

## Supporting information

# Single-Molecule Observations for Determining the Orientation and Diffusivity of Dye Molecules in Lipid Bilayers

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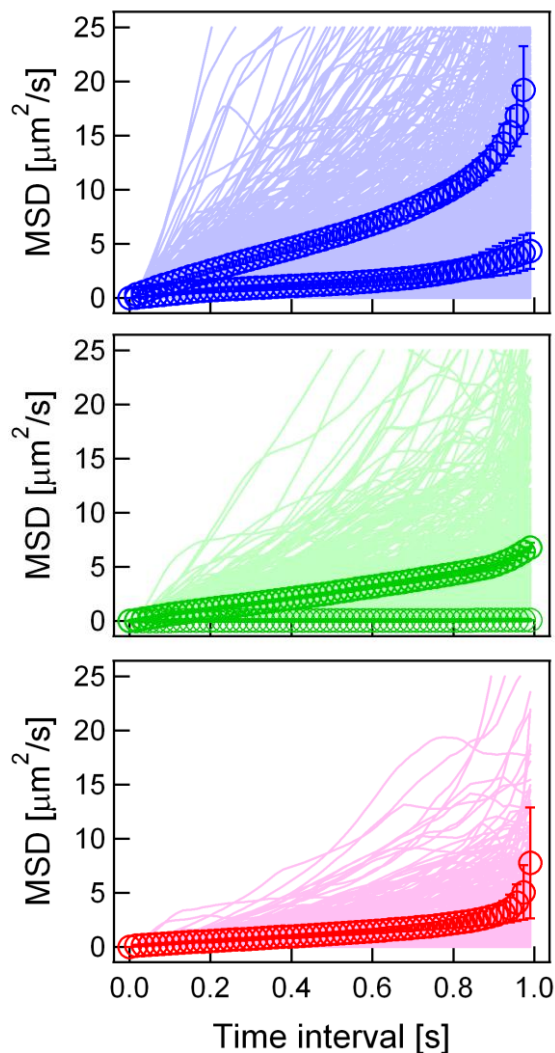


Figure S1. Light color: Mean squared displacement (MSD) analysis results for the trajectories observed at cholesterol concentrations of 0 mol% (blue), 20 mol% (green) and 40 mol% (red). For cholesterol concentration 0 and 20 mol%, two averaged MSD plots are shown because of presence of the respective lower and higher diffusive component according to the diffusion coefficient ( $D$ ) histogram which were shown as Figure 5 in text. Dark color: Averaged mean squared displacement plots from the MSD plots. Standard errors are represented by the error bars.