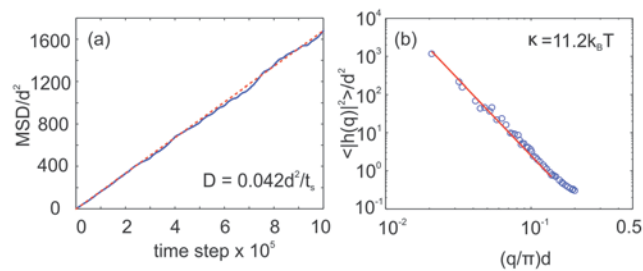


## Supporting Material for

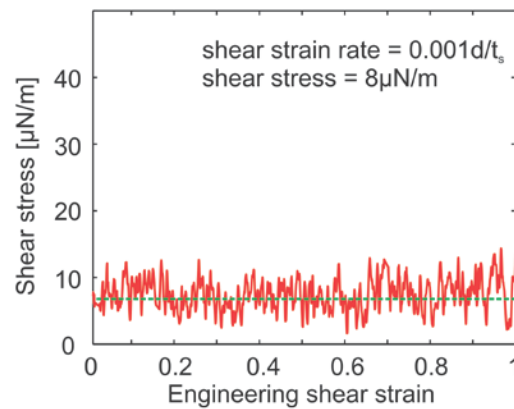
## Two-Component Coarse-Grain Molecular Dynamics Model for the Human Erythrocyte Membrane

He Li and George Lykotrafitis

Department of Mechanical Engineering, The University of Connecticut



**Figure S1.** (a) Linear time dependence of the mean squared displacement (MSD) of the one-component lipid bilayer model. The resulting diffusion coefficient  $D$  is much higher than the diffusion coefficient of the two-component membrane model. (b) The Vertical displacement fluctuation spectrum of one-component lipid bilayer model as a function of wave number  $q$  and the resulting bending rigidity  $\kappa = 11.2 k_B T$



**Figure S2.** Shear stress induced by the viscosity of lipid bilayer at shear rate of  $0.001d/t_s$ . The shear stress is constant meaning that the model shows a fluidic behavior.