

Supplemental Figures

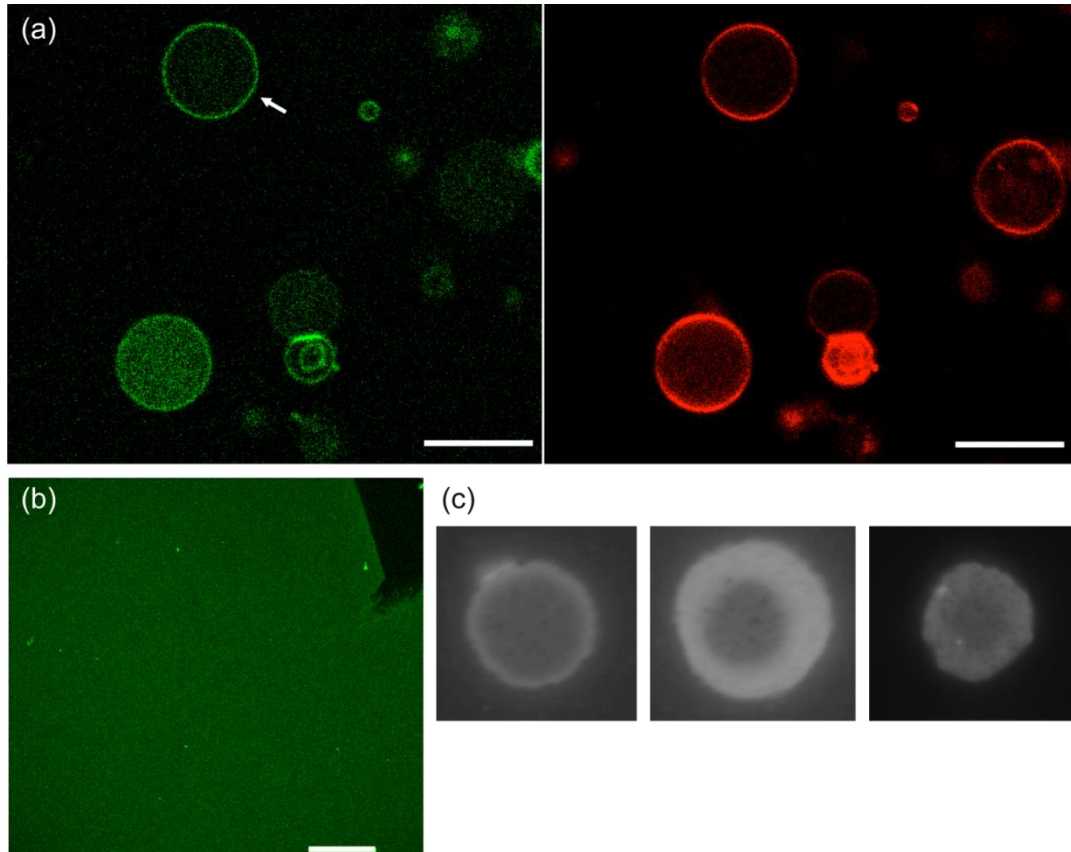


Fig. S1. (a) Confocal images of isolated GPMVs. Left: GFP labelled CD47. Right: Membrane marker DiIC18. The arrow indicates a typical vesicle selected for experiments. Scale bars 10 μ m (b) Anti-GST staining of SIRP α absorbed on a glass slide. The black region is a scratch with a pipette tip to estimate the background level. By fluorescence measurements and comparison to the known density of fluorophores on RBC incubated with free SIRP α , we estimate the SIRP α density to roughly $[R_0] \approx 4000$ molecules/ μ m². This estimate is consistent with E-selectin densities obtained by physisorption on glass slides under similar conditions(1) and in the same order of magnitude as SIRP α layers obtained on plastic surfaces (2). The density is below the maximum packing density of a SIRP α monolayer and we can expect that BSA, which is used for blocking uncovered glass surface, fill the gaps between individual SIRP α molecules. Scale bar 60 μ m. (c) CD47-GFP TIRF micrographs of the adhering GPMV segment on a SIRP α labeled glass surface. Micrographs were acquired on three different GPMVs during the first 5-20 minutes after initial GPMV adhesion. The ring-like CD47-GFP patterns equilibrated over time to a homogenous fluorescence signal. All further experiments were conducted on equilibrated, homogenous adhesion segments. Adhesion segments were typically about 10 μ m in diameter.

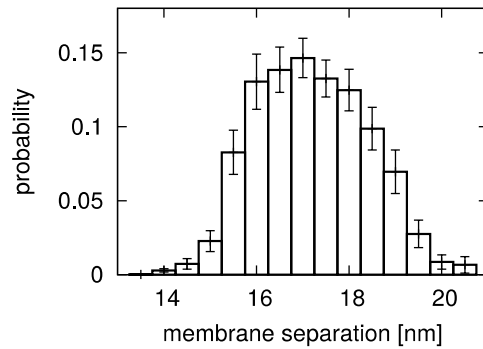


Fig. S2 Probability distribution of membrane-substrate distance obtained from simulations of the coarse-grained CD47-SIRP α complex.

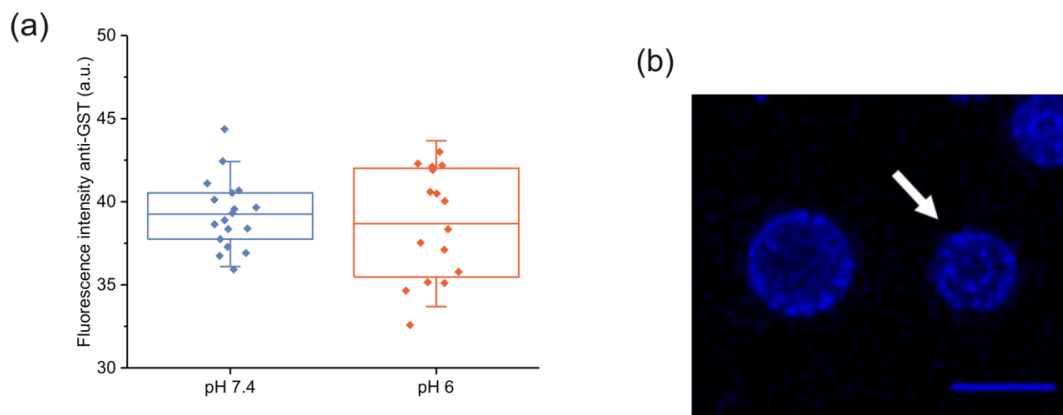


Fig. S3. (a) Binding of (water soluble) GST-SIRP α to RBC showed no significant effect of shift from pH=7.4 to pH=6 on K3d binding affinity. (b) Incubation of red blood cells (RBCs) together with GPMVs and fluorescent anti-CD47 in order to estimate the CD47 concentration on GPMV's. Arrow indicates RBC. Scale bar 10 μ m

1. Lorz, B. G., A.-S. Smith, C. Gege, and E. Sackmann. 2007. Adhesion of Giant Vesicles Mediated by Weak Binding of Sialyl-LewisX to E-Selectin in the Presence of Repelling Poly(ethylene glycol) Molecules. *Langmuir* 23:12293-12300.
2. Subramanian, S., R. Parthasarathy, S. Sen, E. T. Boder, and D. E. Discher. 2006. Species- and cell type-specific interactions between CD47 and human SIRP α . *Blood* 107:2548-2556.