Supplemental Figures

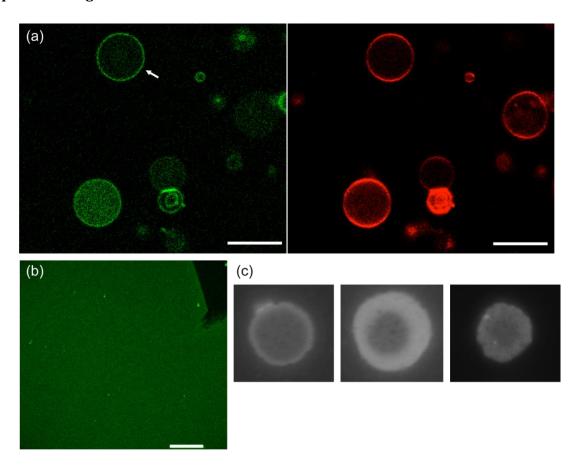


Fig. S1. (a) Confocal images of isolated GPMVs. Left: GFP labelled CD47. Right: Membrane marker DiIC18. The arrow indicates a typical vesicle selected for experiments. Scale bars $10\mu m$ (b) Anti-GST staining of SIRPα absorbed on a glass slide. The black region is a scratch with a pipette tip to estimate the background level. By florescence measurements and comparison to the known density of fluorophores on RBC incubated with free SIRPα, we estimate the SIRPα density to roughly [R_0] \approx 4000 molecules/ μm^2 . 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 SIRPα layers obtained on plastic surfaces (2). The density is below the maximum packing density of a SIRPα monolayer and we can expect that BSA, which is used for blocking uncovered glass surface, fill the gaps between individual SIRPα molecules. Scale bar $60\mu m$. (c) CD47-GFP TIRF micrographs of the adhering GPMV segment on a SIRPα 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.

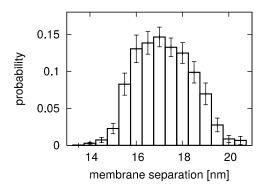


Fig. S2 Probability distribution of membrane-substrate distance obtained from simulations of the coarse-grained CD47-SIRP α complex.

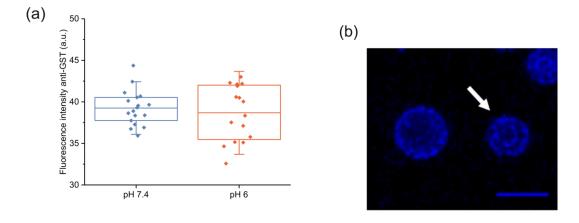


Fig. S3. (a) Binding of (water soluble) GST-SIRP α to RBC showed no significant effect of shift from pH=7.4 to pH=6 on K3d binding affinity. (b) Incubation of red blood cells (RBCs) together with GPMVs and fluorescent anti-CD47 in order to estimate the CD47 concentration on GPMV's. Arrow indicates RBC. 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 SIRPα. Blood 107:2548-2556.