**427k Pleiotropic Responses Mediated by Cd47-Sirp□ Binding: Adhesion as a Common Link**

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Many context dependent roles have been assigned to CD47 and SIRP□ on hematopoietic cells, including lymphocytes, phagocytes, & red cells. CD47 on T-cells enables adhesion and spreading by binding SIRP□ on antigen presenting cells (APCs), playing a co-stimulatory molecule in T-cell activation. Both CD47 and SIRP□ on Neutrophils are implicated in transmigration through endothelial/epithelial cell layers, while no adhesive role of this interaction has been established. CD47 on red cells reportedly signals through SIRP□ on phagocytes to inhibit self-phagocytosis, while clearly adhesion between these cell types is not observed in vivo. The single unifying theme to all these functions may be that binding between these two proteins can mediate adhesive interactions and lead to signaling - with the outcome quantitatively dependent on several variables such as receptor density, receptor mobility & clustering, and post-translational modifications. To dissect the effects of these variables, we have developed static adhesion and cell spreading assays using native cells and also recombinant cells that express these proteins as fusions to the green fluorescent protein (GFP) and derivatives. These studies reveal that all of the above variables indeed quantitatively affect the end result from CD47-SIRP□ binding, providing an explanation for pleiotropic responses from the same interaction.