Programmed death ligand 1 reverse signaling in dermal dendritic cells promotes dendritic cell migration required for skin immunity. ED Lucas (PhD., GS.), JB Schafer, J Matsuda, M Kraus, MA Burchill and BA Tamburini. Department of Medicine, University of Colorado, Denver, CO.

While the function of extracellular region of programmed death ligand 1 (PD-L1) through its interactions with PD-1 on T cells is well studied, little is understood regarding the intracellular domain of PD-L1. Here, we outline a major role for PD-L1 intracellular signaling in the control of dendritic cell (DC) migration from the skin to the draining lymph node (dLN). Using a mutant mouse model, we identify a TSS signaling motif within the intracellular domain of PD-L1. The TSS motif proves critical for chemokine mediated DC migration to the dLN during inflammation. This loss of DC migration, in the PD-L1 TSS mutant, leads to a significant decline in T cell priming when DC trafficking is required for antigen delivery to the dLN. Finally, the TSS motif is required for chemokine receptor signaling downstream of the Gα subunit of the heterotrimeric G protein complex, ERK phosphorylation and actin polymerization in DCs.