

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 $G\alpha$ subunit of the heterotrimeric G protein complex, ERK phosphorylation and actin polymerization in DCs.