



Research Week 2020

Novel Protein-Protein Interactions with c-Myc at the Nuclear Pore Basket

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Keywords

c-Myc, PDAC, RIME, Nuclear Pore Complex

Abstract

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In recent studies, c-Myc has been shown to localize to the nuclear pore complex (NPC) after specific post-translational modifications. The localization of c-Myc to the NPC can mediate aspects of stress response to environmental signals, and separate studies show a role for c-Myc in gene gating at the NPC. The c-MYC interacting protein partners at the NPC are still unknown and could potentially contribute to oncogenic responses governed by c-Myc. We utilized a Rapid Immunoprecipitation Mass spectrometry of Endogenous proteins (RIME) experiment to identify proteins, which interact with C-Myc (N-262 Abcam), TPR, and other nuclear pore proteins (Mab414). The identified protein targets from the RIME experiment were then tested in mouse embryonic fibroblasts, pancreatic cancer, and lymphoma cell lines. Currently, we are examining the role of c-Myc and RIME-identified protein interactions to uncover potential therapeutic targets in PDAC.

