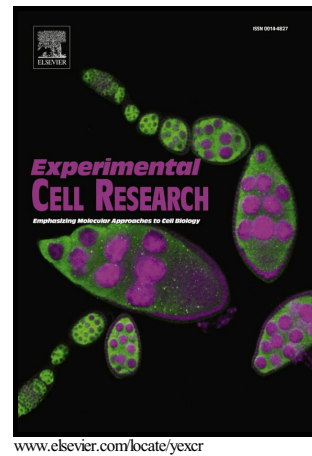


# Author's Accepted Manuscript

PRP4 kinase induces actin rearrangement and epithelial-mesenchymal transition through modulation of the actin-binding protein cofilin

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PRP4 kinase induces actin rearrangement and epithelial-mesenchymal transition  
through modulation of the actin-binding protein cofilin

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Abstract

Cell actin cytoskeleton is primarily modulated by Rho family proteins. RhoA regulates several downstream targets, including Rho-associated protein kinase (ROCK), LIM-Kinase (LIMK), and cofilin. Pre-mRNA processing factor 4B (PRP4) modulates the actin cytoskeleton of cancer cells via RhoA activity inhibition. In this study, we discovered that PRP4 over-expression in HCT116 colon cancer cells induces cofilin dephosphorylation by inhibiting the Rho-ROCK-LIMK-cofilin pathway. Two-dimensional gel electrophoresis, and matrix-assisted laser desorption/ionization time-of-flight mass-spectrometry (MALDI-TOF MS) analysis indicated increased expression of

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