2021SharlowMeredith-abstract

Abstract

YLR419W is a yeast homolog for *DHX36*, a gene which encodes a G-quadruplex helicase, in humans. By studying how knocking out *YLR419W* affects *Saccharomyces cerevisiae* growth and survival following cellular stress, we can learn more about the role of the protein Ylr419w in in responding to cellular stress. I hypothesized that when *YLR419W* is deleted, *S. cerevisiae* will be less able to survive stress. To test this hypothesis, growth and survival under proteotoxic, osmotic, oxidative, and heat induced stress was tested using yeast growth assays. Deletion of *YLR419W* in experimental clone 1 moderately inhibited growth under proteotoxic stress, and did not inhibit growth under thermal stress, osmotic stress, and oxidative stress. However, the proteotoxic stress effects were not repeatable across yeast clone replicates, suggesting that Ylr419w is not required for the proteotoxic stress response.

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