

eIF5A BINDS TO ACTIVE RIBOSOMES AND ITS INHIBITION IMPAIRS TRANSLATION IN *S. CEREVISIAE*

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Abstract

The putative translation factor 5A (eIF5A) is essential for cell viability and is highly conserved from archaebacteria to mammals. Although this protein was originally identified as a translation initiation factor, subsequent experiments did not support a role for eIF5A in general translation. In this work, we demonstrate that eIF5A interacts with structural components of the 80S ribosome, as well as with the translation elongation factor 2 (eEF2). Moreover, eIF5A is further shown to co-fractionate with monosomes in a translation-dependent manner. Finally, eIF5A mutants show altered polysome profiles and are sensitive to translation inhibitors. Our results re-establish a function for eIF5A in translation and suggest a role for this factor in translation elongation instead of translation initiation.

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