A Bump-Hole Strategy for Increased Stringency of Cell-Specific Metabolic Labeling of RNA

Autores

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Abstract

Profiling RNA expression in a cell-specific manner continues to be a grand challenge in biochemical research. Bioorthogonal nucleosides can be utilized to track RNA expression; however, these methods currently have limitations due to background and incorporation of analogs into undesired cells. Herein, we design and demonstrate that uracil phosphoribosyltransferase can be engineered to match 5-vinyluracil for cell-specific metabolic labeling of RNA with exceptional specificity and stringency.