

Interaction of wheat protein synthesis elongation factor 1 with GTP analogs

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Wheat protein synthesis elongation factor 1 was tested for binding to GTP analogs, including structures resembling "caps" that are present at the 5'-termini of most eukaryotic mRNAs. The interaction was assayed by determining the capacity of the analogs to inhibit the binding of [³H]GTP to elongation factor 1. Significant interaction of elongation factor 1 with G(5')ppp(5')G, G(5')pppp(5')G, and G(5')ppp(5')A was observed. Methylation of a ribose 2'-hydroxyl had very little effect, but methylation of the 7 position of guanosine greatly diminished the affinity of elongation factor 1 for these compounds. m⁷G(5')ppp(5')Cm, m⁷G(5')ppp(5')Um, and m⁷G(5')ppp(5')Am gave no detectable binding with EF1. © 1978.