

\* Role of methyl GTP cap & poly-A tail in translation

→ Role of poly-A tail:

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Stimulate recruitment of 40S ribosomal subunit to mRNA through complex set of interactions.

- PAB [poly A binding protein] bound to poly [A] tail, interact with eIF-4E & 4E subunit of cap bound eIF-4F to form circular structure that helps direct 40S ribosomal subunit to 5' end of mRNA & also likely stabilize mRNA from exonucleolytic degradation.

- Both are required for efficient initiation of protein synthesis.

- Differential protein-protein interactions between general & specific mRNA translational repressors & eIF-4E result in m7G cap dependent translation control.