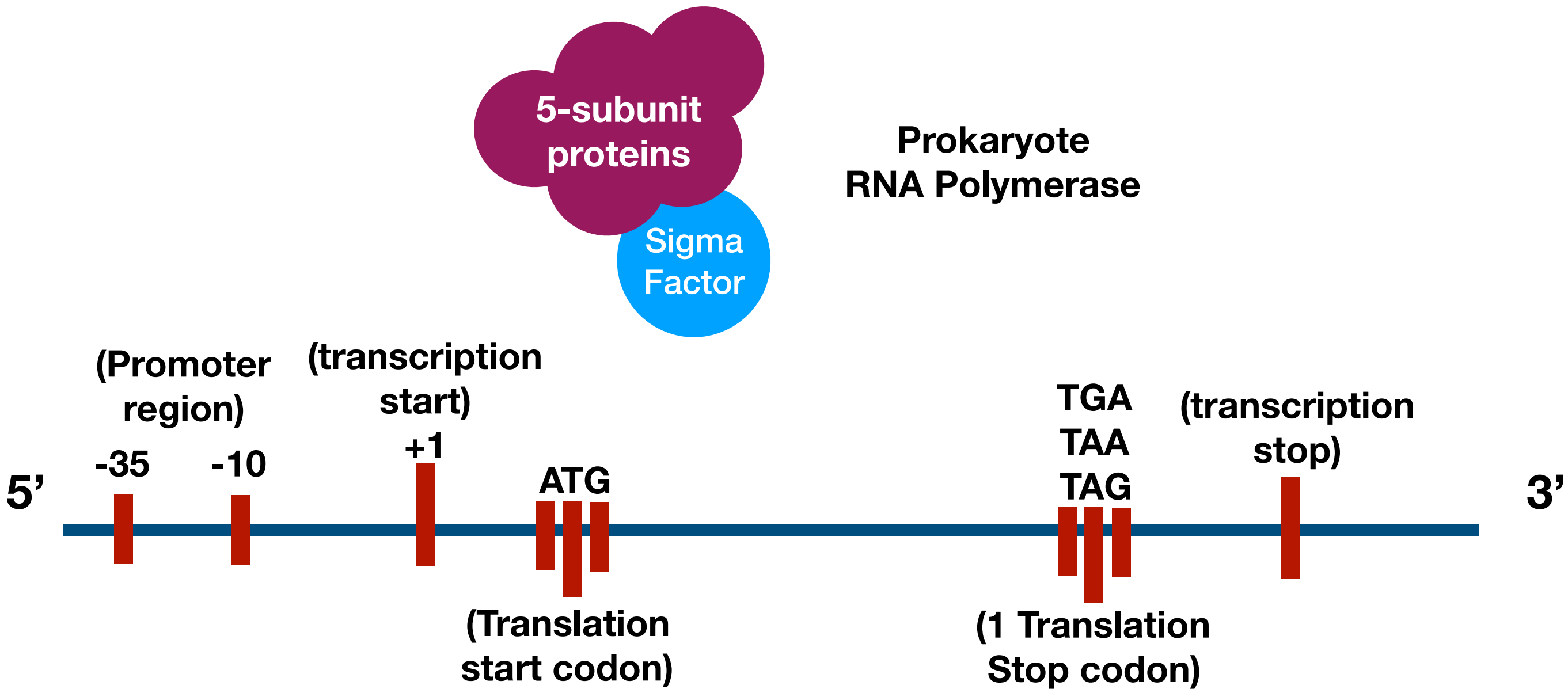


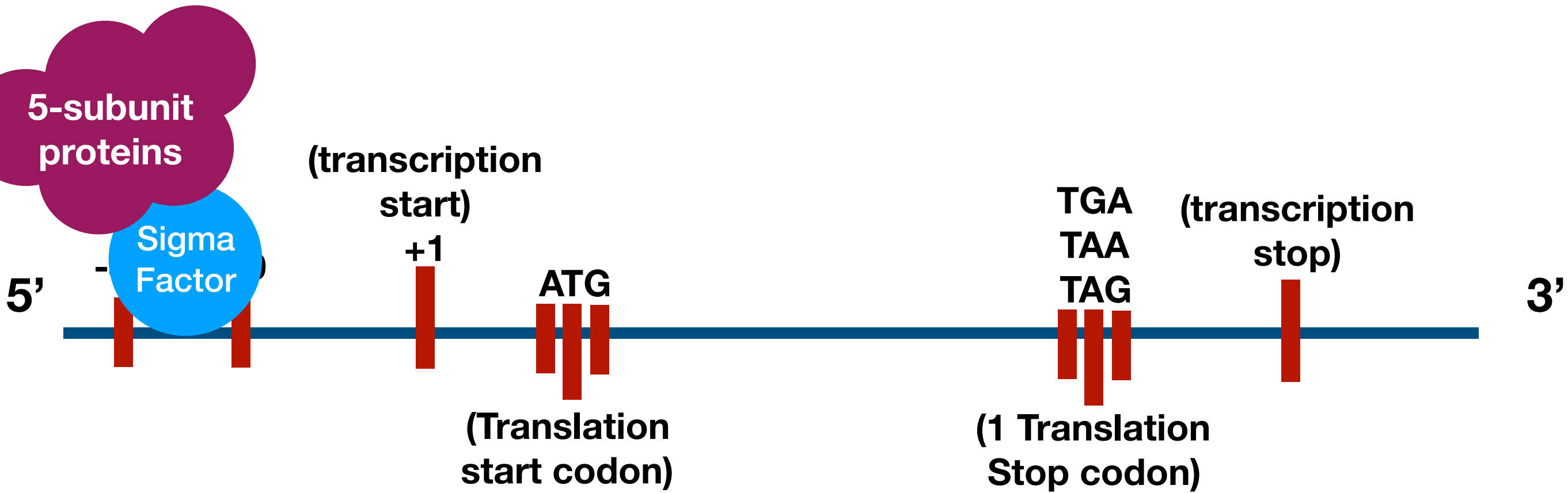
Important Note

- It is conventional to depict transcription by drawing only the **coding strand**: the DNA strand that matches the final RNA created by RNA polymerase.
- Keep in mind that RNA polymerase itself (just like DNA polymerase) **is moving in a 3' to 5' direction on the template strand**, which is **NOT** depicted in these diagrams.

Prokaryotic transcription

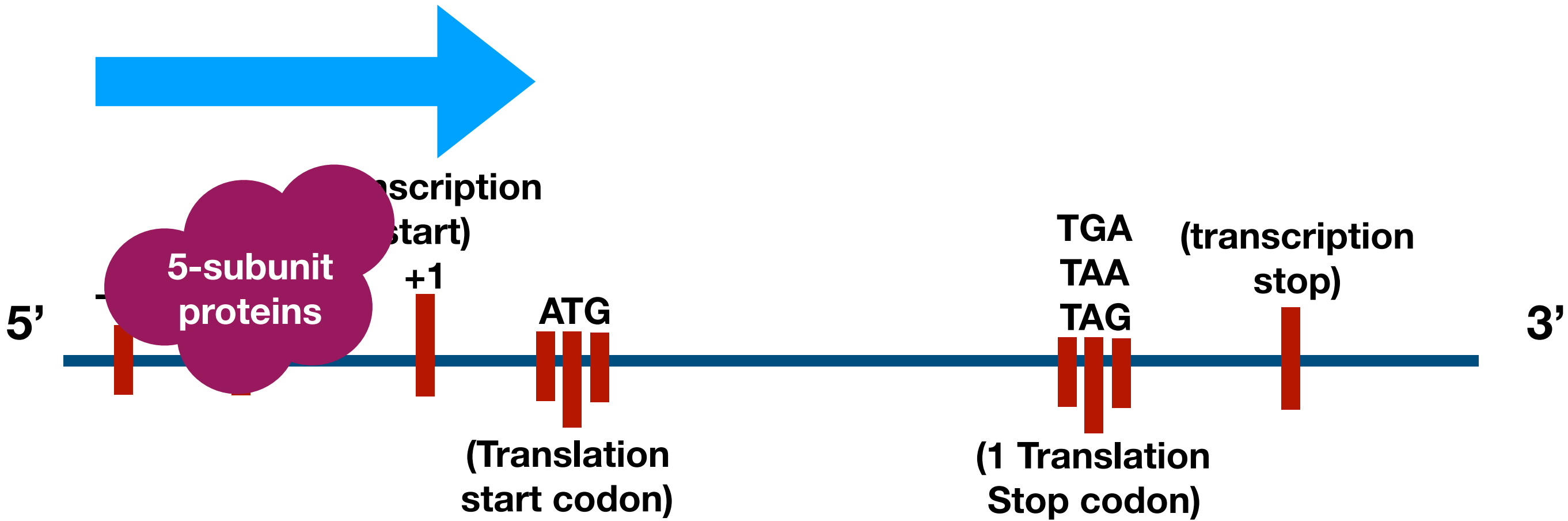


Prokaryotic transcription



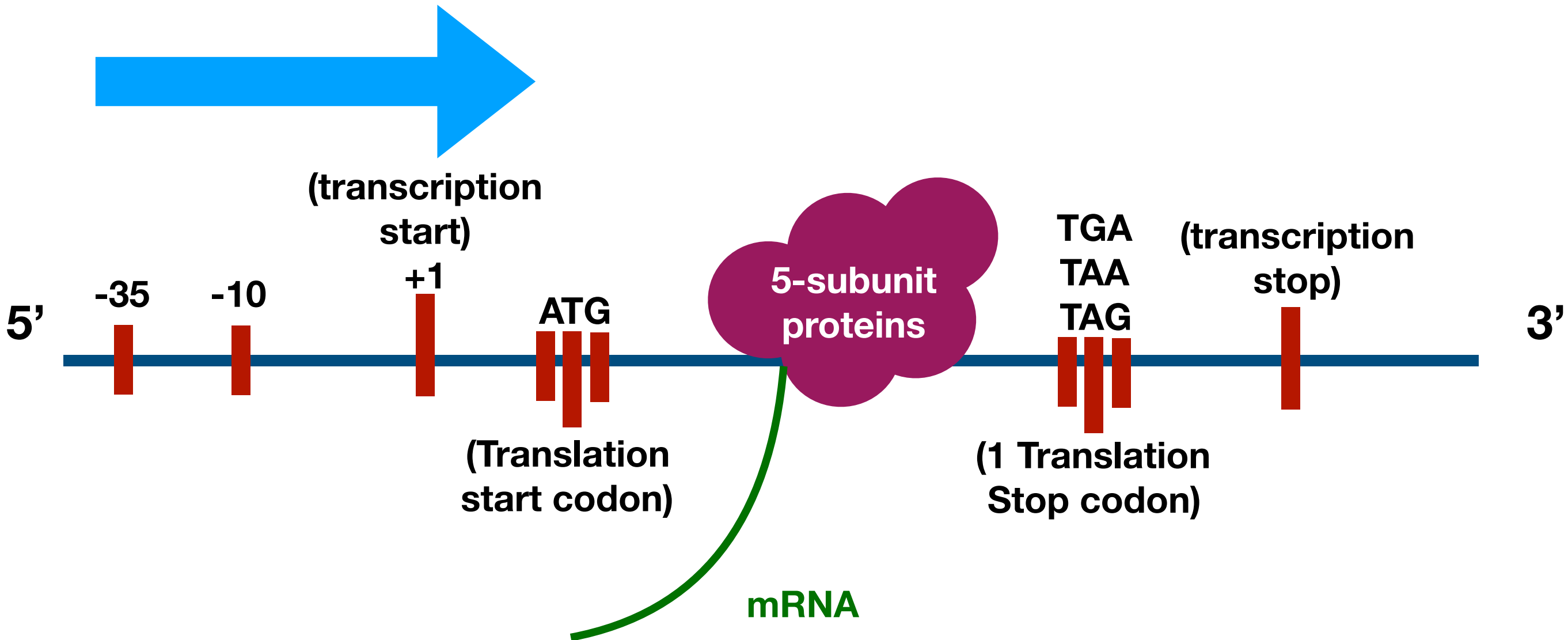
INITIATION

Prokaryotic transcription



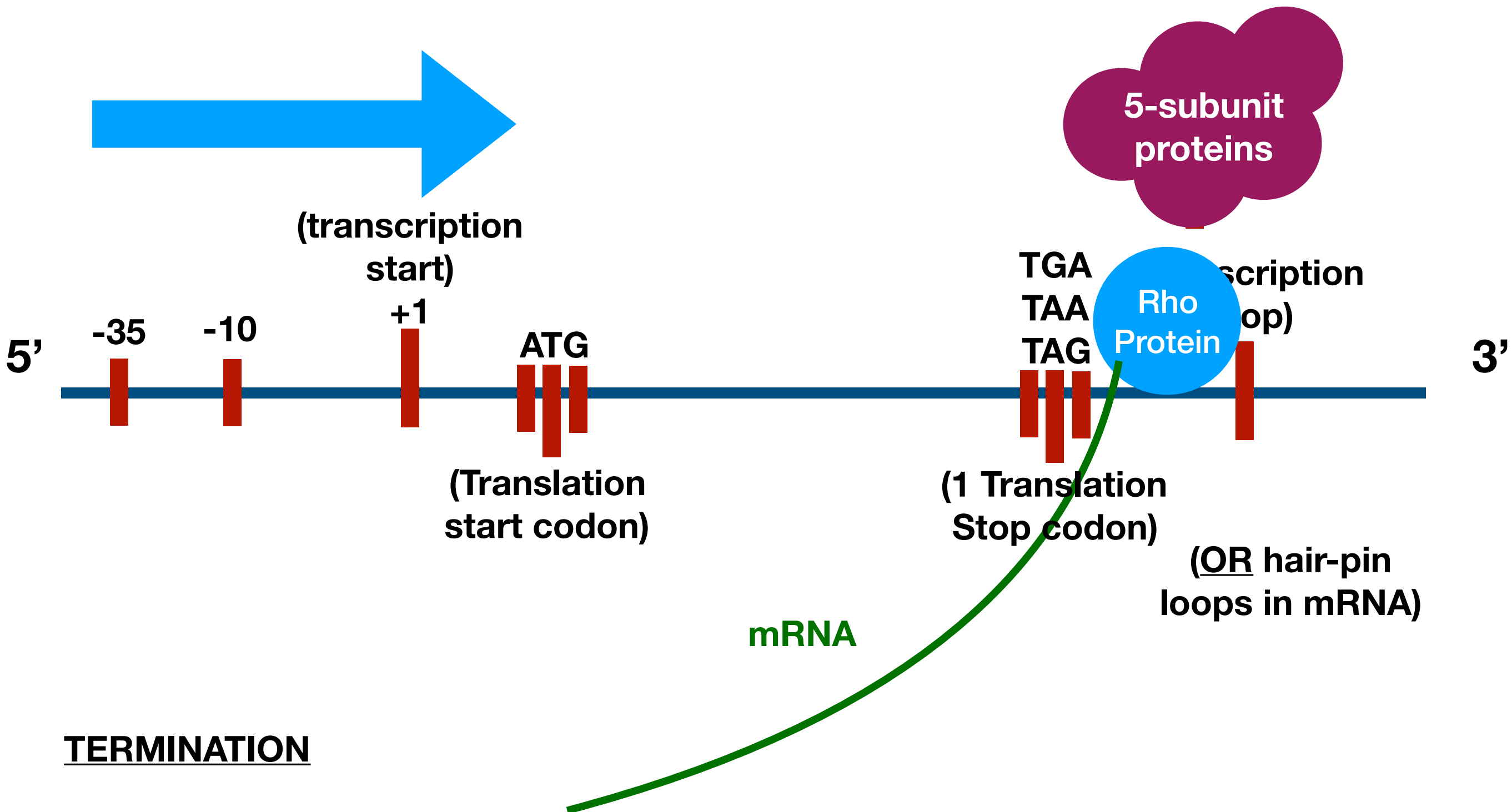
ELONGATION

Prokaryotic transcription

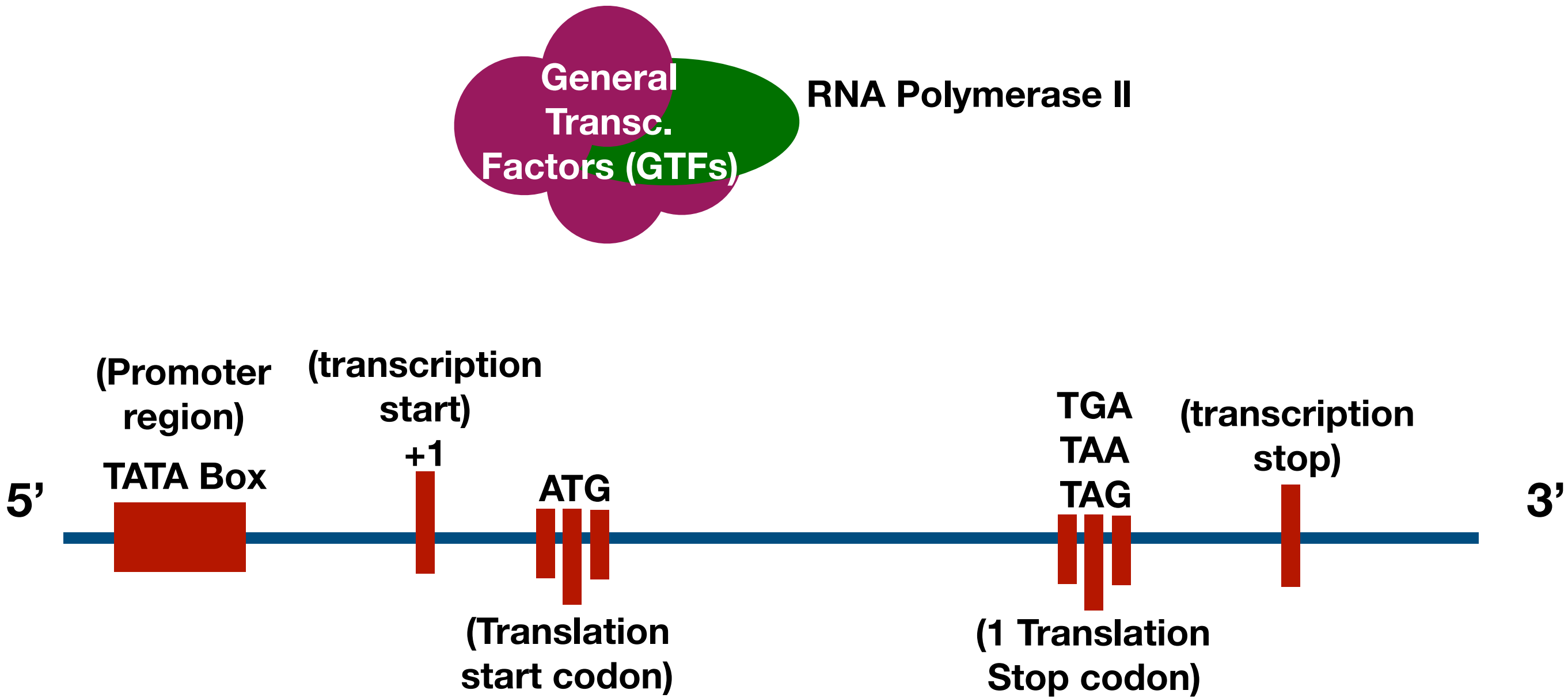


ELONGATION

Prokaryotic transcription

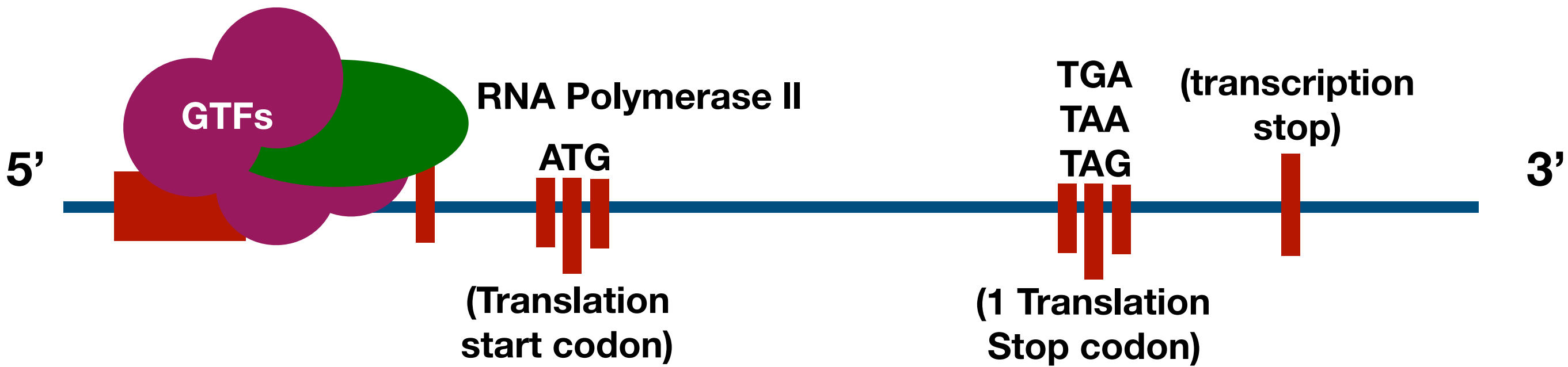


Eukaryotic transcription



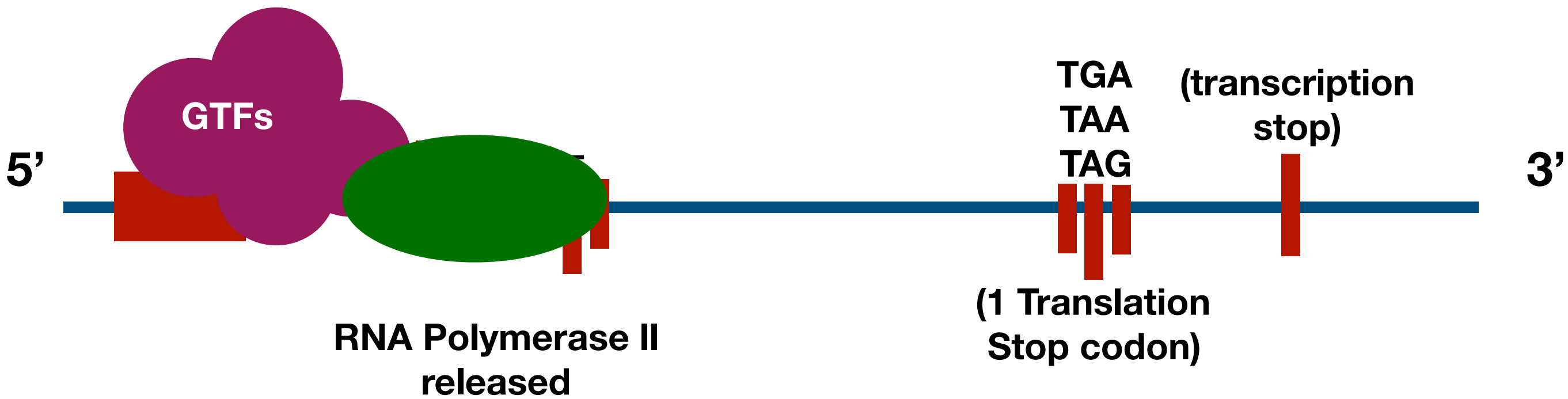
INITIATION

Eukaryotic transcription



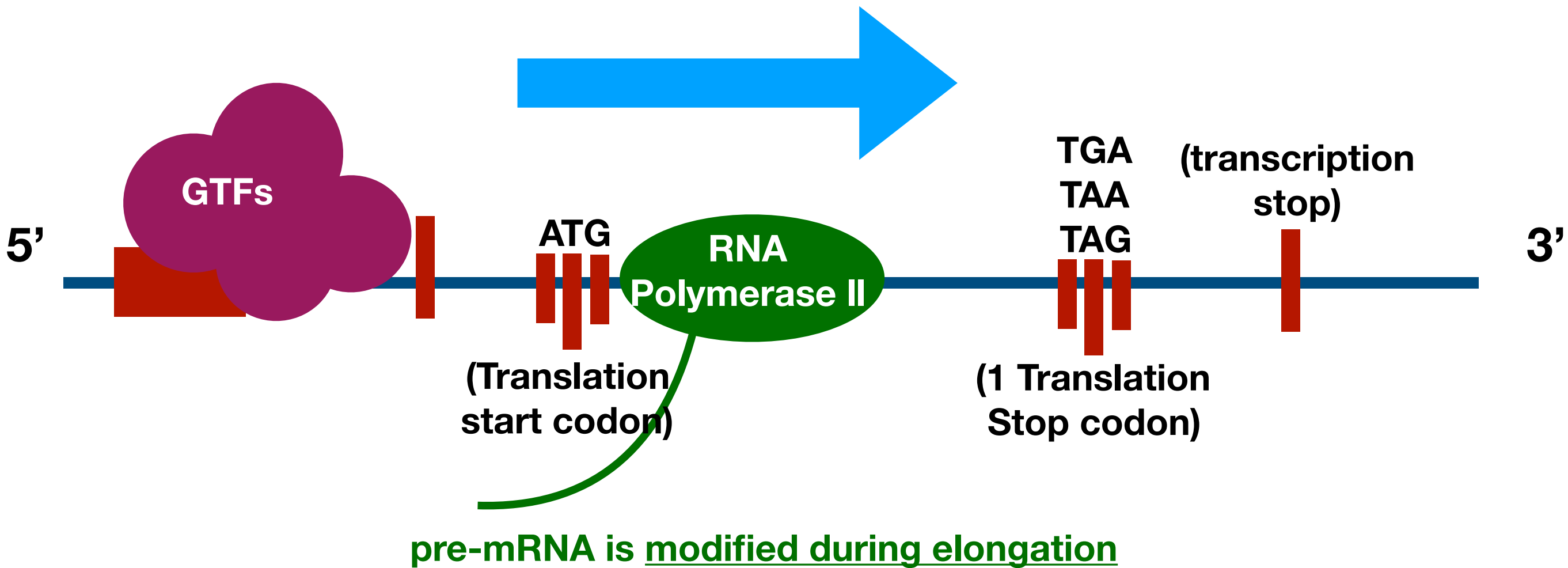
INITIATION

Eukaryotic transcription



INITIATION

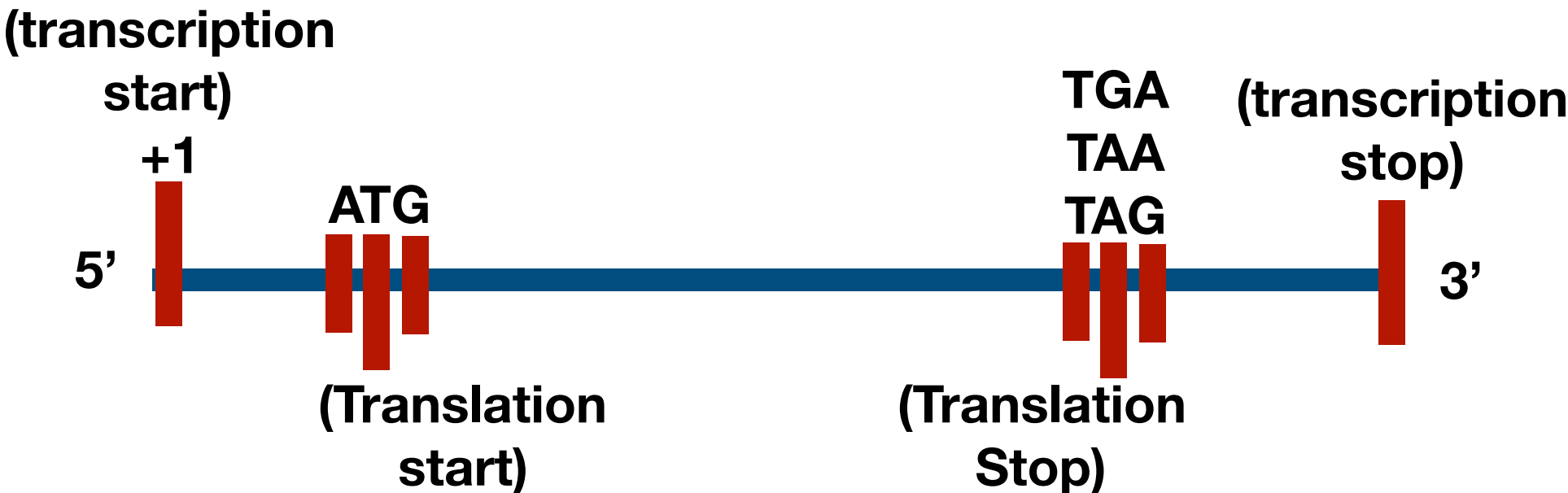
Eukaryotic transcription



ELONGATION

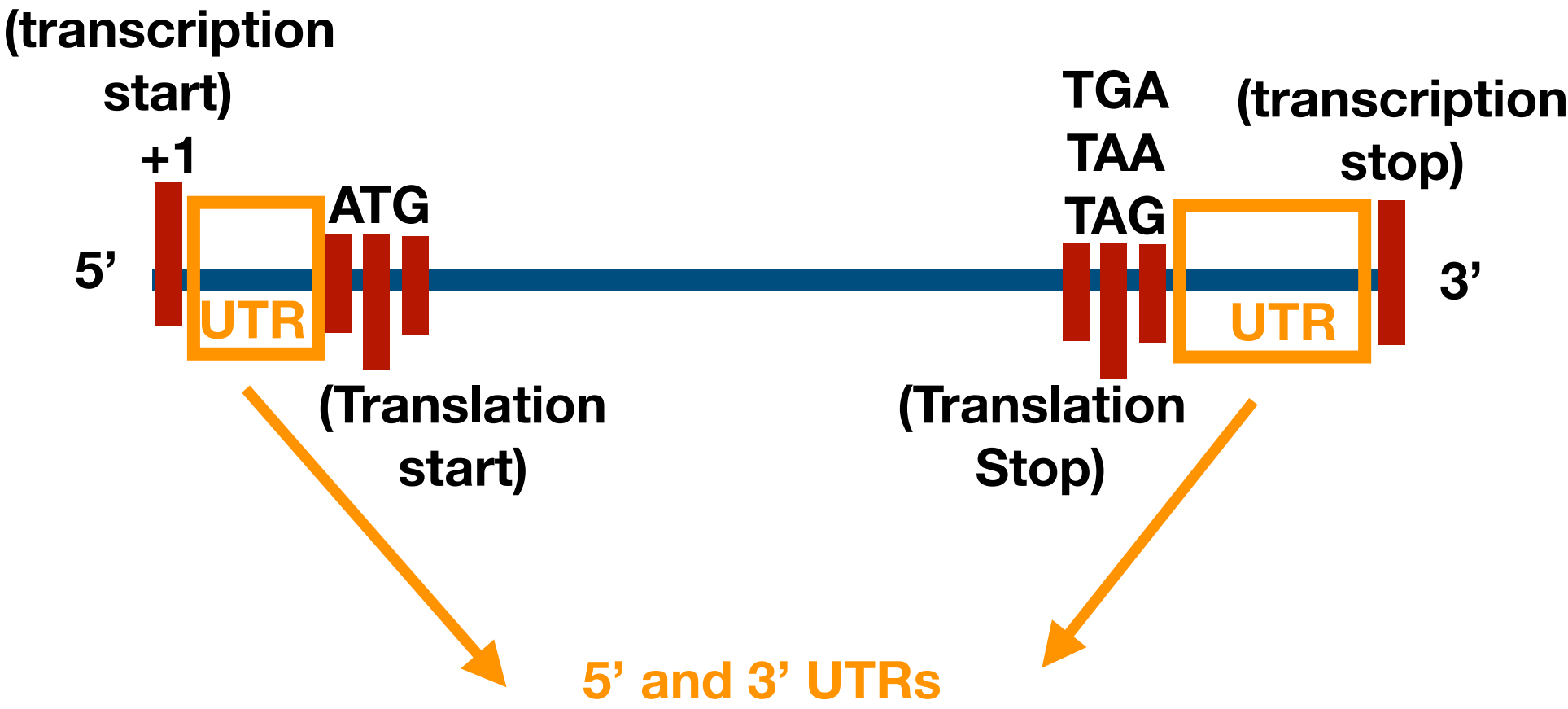
Eukaryotic transcription: pre-mRNA Modification

PRE-mRNA



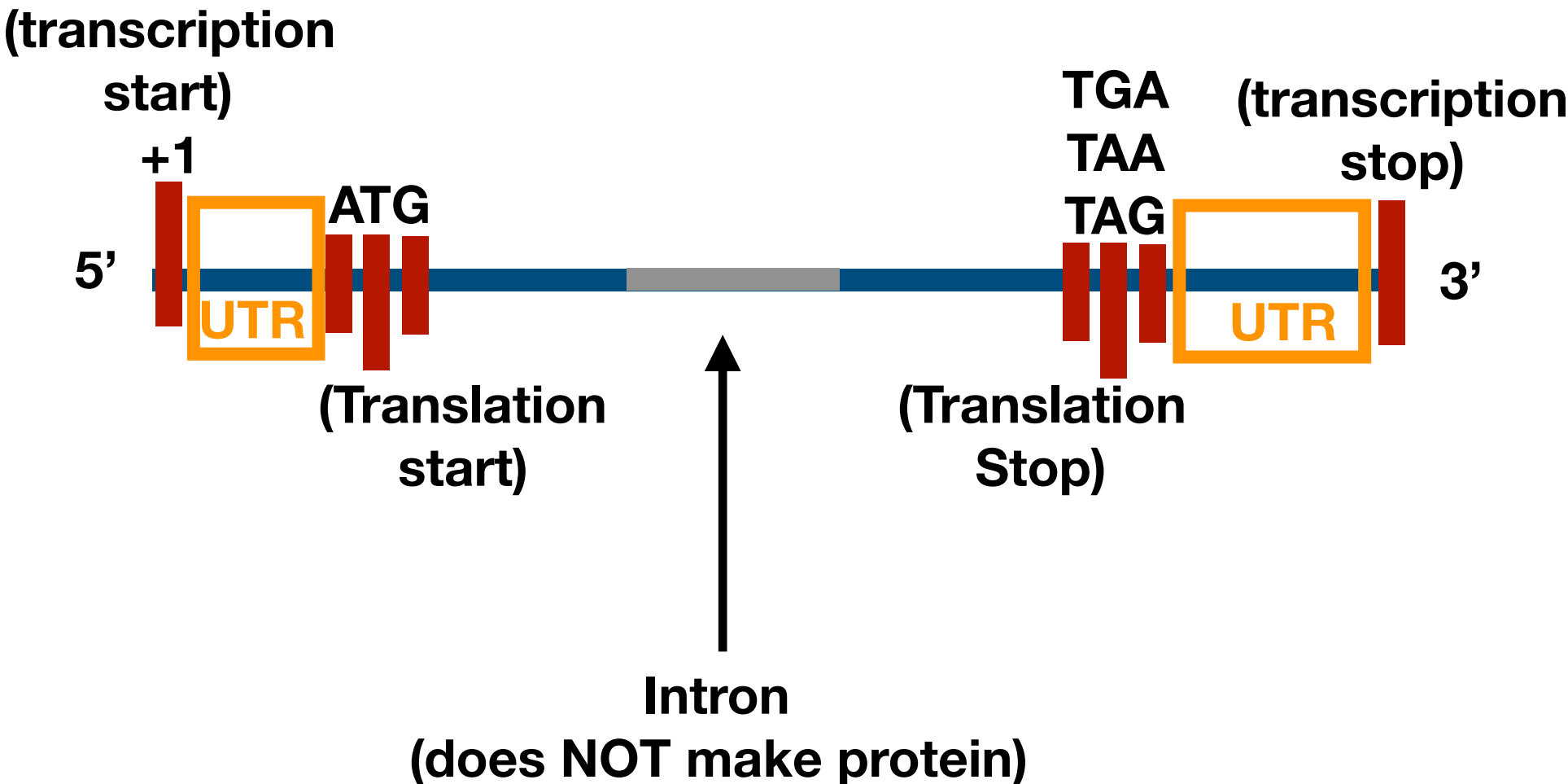
Eukaryotic transcription: pre-mRNA Modification

PRE-mRNA



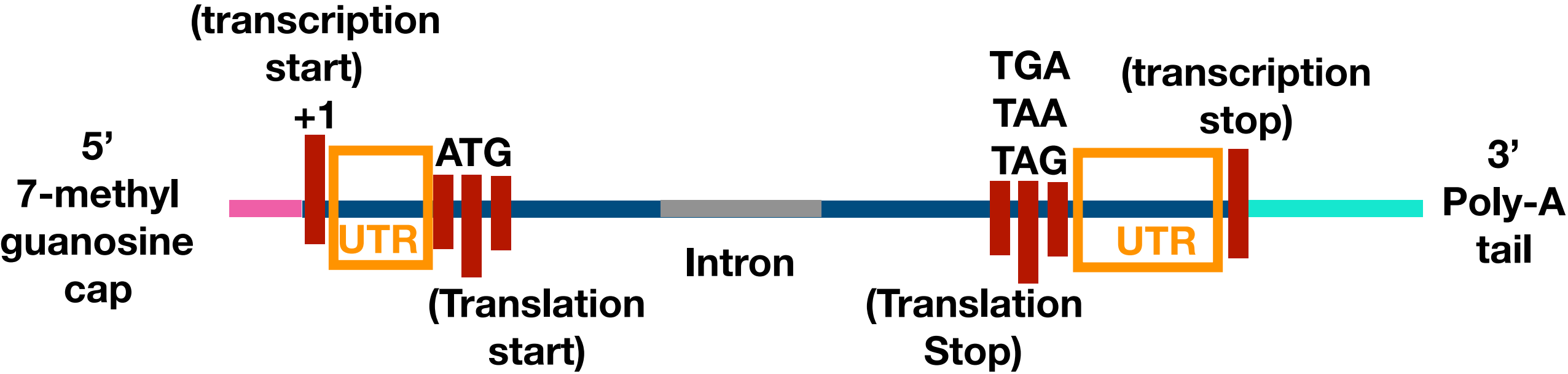
Eukaryotic transcription: pre-mRNA Modification

PRE-mRNA

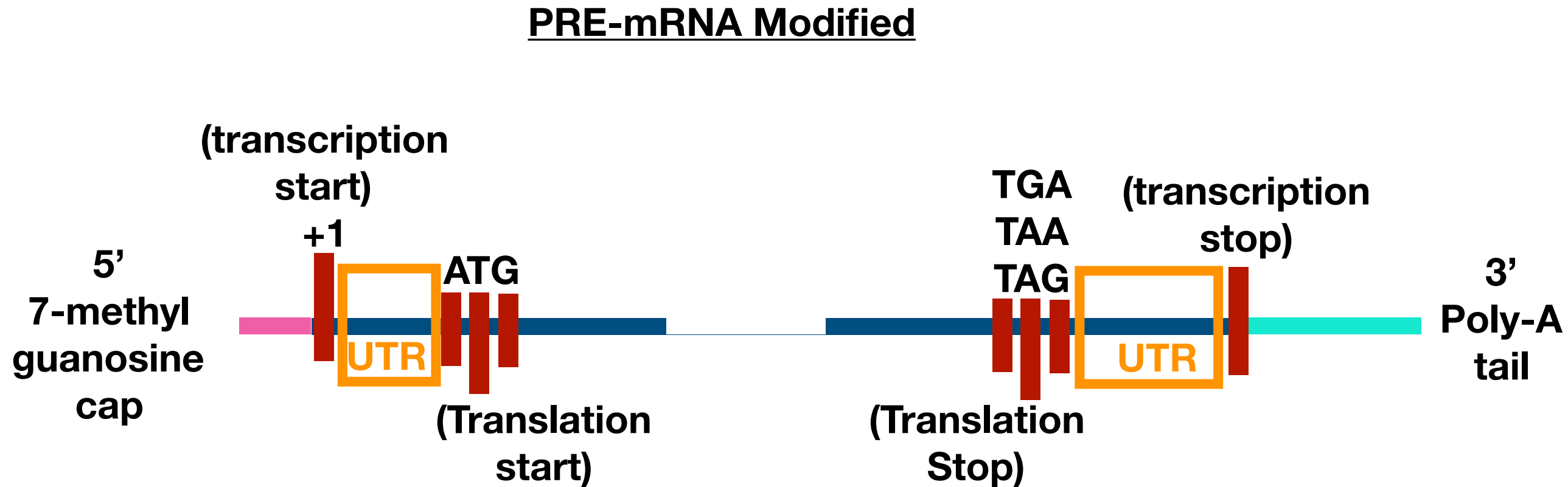


Eukaryotic transcription: pre-mRNA Modification

PRE-mRNA Modified



Eukaryotic transcription: pre-mRNA Modification



GUATCAGTAG

Introns removed at 5' GU and 3' AG sites

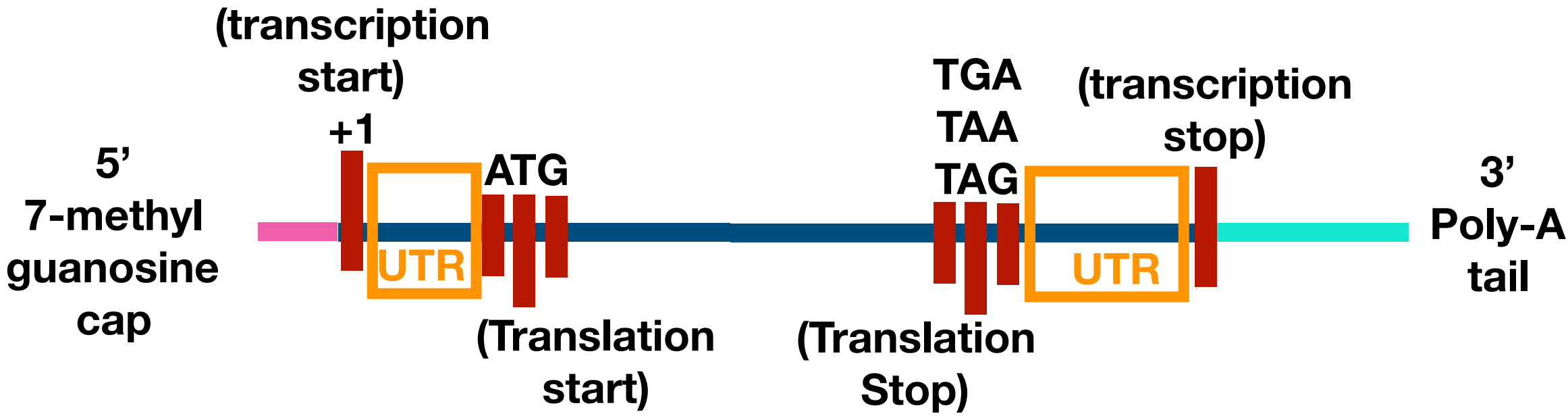
Depending on which GU and AG sites are chosen, alternative splicing can occur.

For Example:

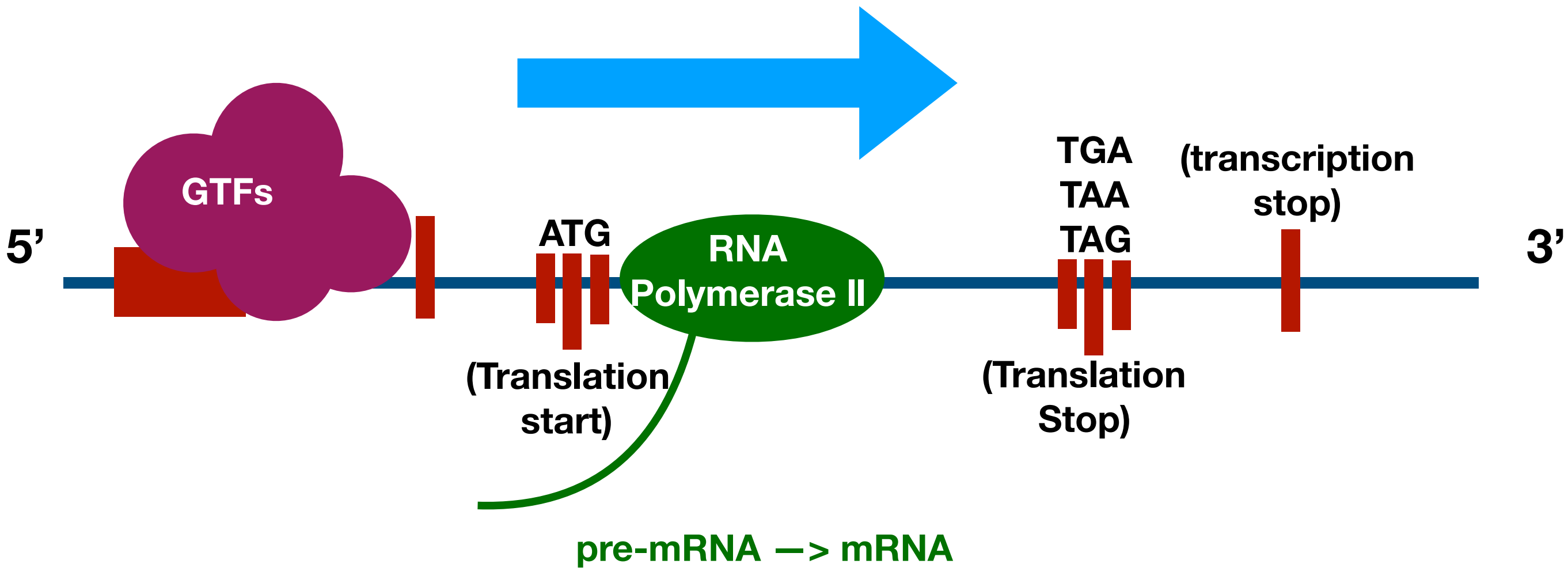
Exon skipping can occur if the splice occurs at the GU of one intron and the AG of another intron.

Eukaryotic transcription: pre-mRNA Modification

Mature mRNA

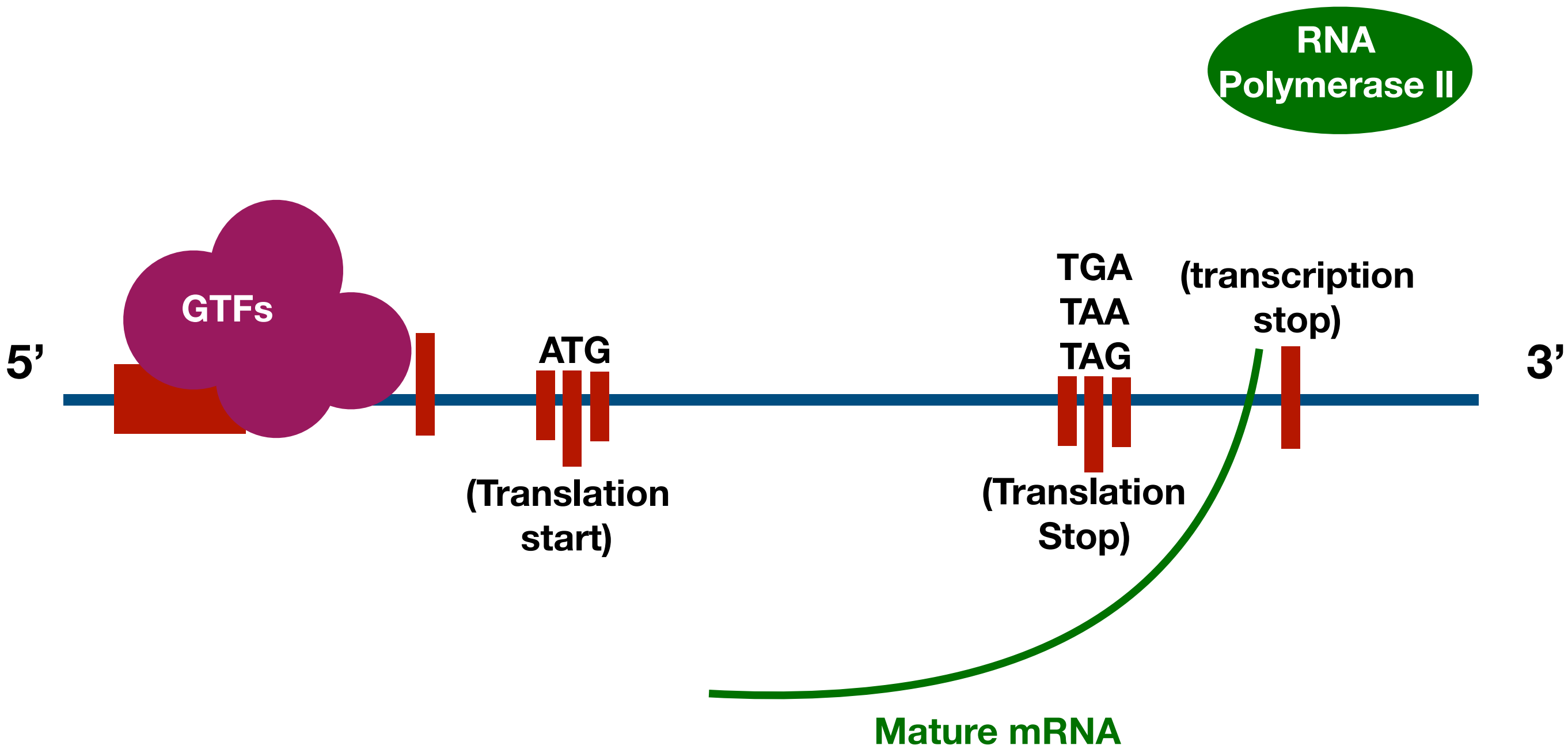


Eukaryotic transcription



ELONGATION

Eukaryotic transcription



TERMINATION