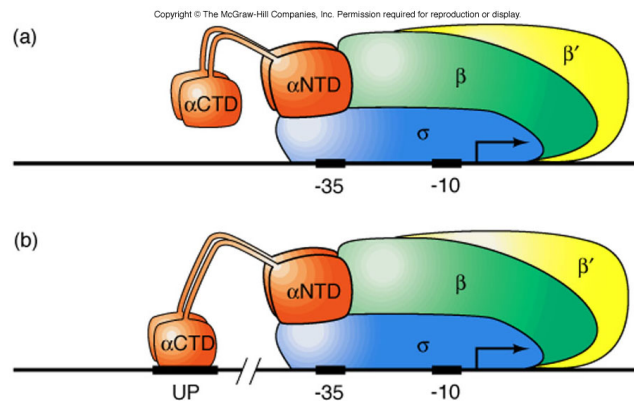


Prokaryotic transcription

Regulatory elements

- core promoter: -10 box and -35 box
- UP element: enhances transcriptional production (as much as 30x)

RNA Polymerase



- σ factor very important to binding; incomplete complex can bind, but complete holoenzyme binds much better
- function of α factor proven by 1) mutating UP element and 2) modifying C-terminal domain (CTD)

Transcription termination

- intrinsic termination: hairpin formation followed by AT-rich region (weak binding)
- rho-dependent termination: hairpin formation followed by transcript release by rho helicase

Further reading

Two papers from the recent literature discuss transcription. We have been assigned to read them over the long weekend, and we will be tested later on the material.

- <http://dx.doi.org/10.1016/j.cell.2011.10.041>
- <http://dx.doi.org/10.1016/j.cell.2011.11.033>