

A RNA Pol pauses at 1:2 pause site

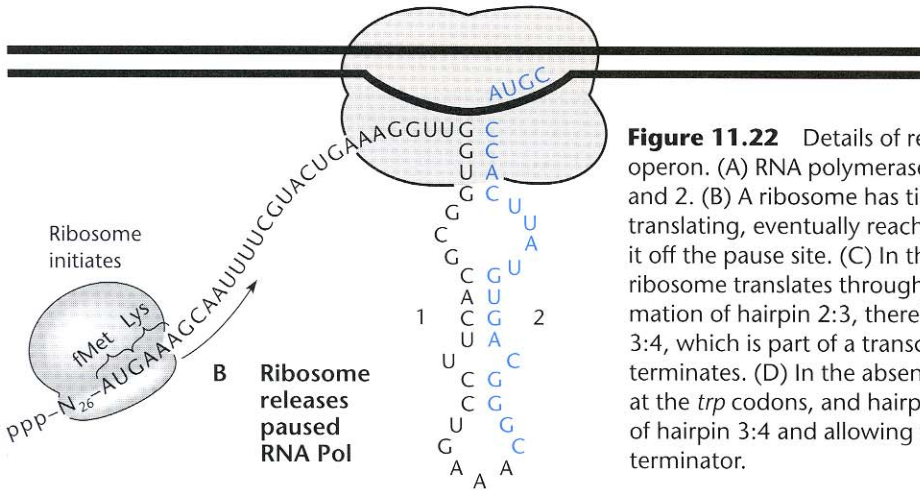
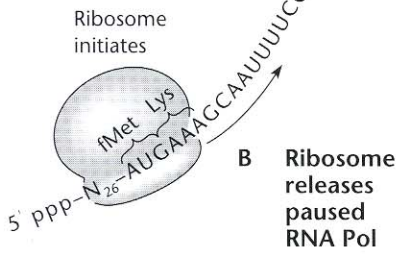
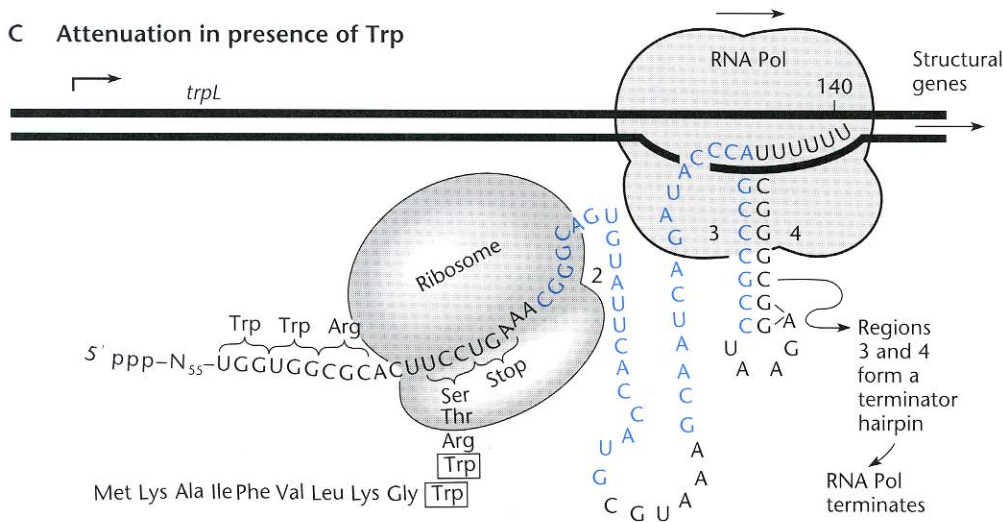


Figure 11.22 Details of regulation by attenuation in the *trp* operon. (A) RNA polymerase pauses after transcribing regions 1 and 2. (B) A ribosome has time to load on the mRNA and begin translating, eventually reaching the RNA polymerase and bumping it off the pause site. (C) In the presence of tryptophan, the ribosome translates through the *trp* codons and prevents the formation of hairpin 2:3, thereby allowing the formation of hairpin 3:4, which is part of a transcription terminator. Transcription terminates. (D) In the absence of tryptophan, the ribosome stalls at the *trp* codons, and hairpin 2:3 forms, preventing the formation of hairpin 3:4 and allowing transcription to continue through the terminator.

B Ribosome releases paused RNA Pol



C Attenuation in presence of Trp



D Transcription elongation in absence of Trp

