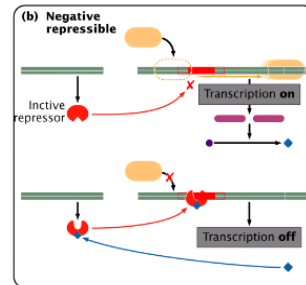
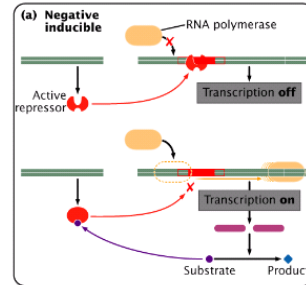


9.3 Negative control

- Transcription level
 - Stops transcription
 - RNA polymerase binding repressed
- Inducible
 - Excess substrate (turns on)
 - **Prevents repressor binding**
- Repressible
 - Excess product (turns off)
 - **Allows repressor binding**

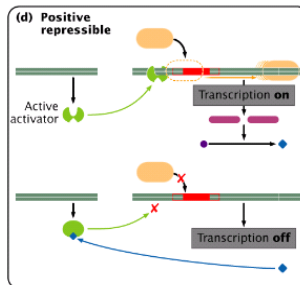
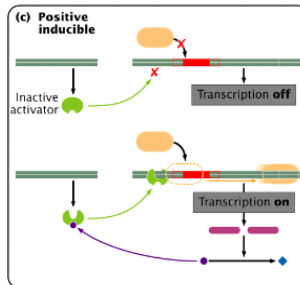


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9.4 Positive Control

- Transcription level
 - Activates transcription
 - RNA polymerase binding enhanced
- Inducible
 - Excess substrate (turns on)
 - **Allows activator binding**
- Repressible
 - Excess product (turns off)
 - **Prevents activator binding**

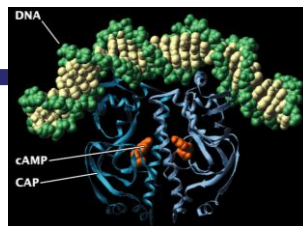


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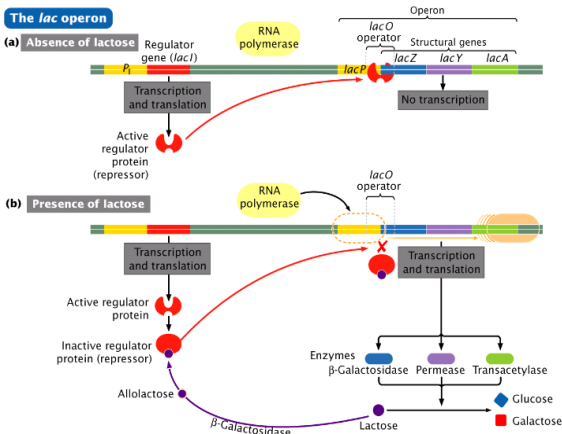
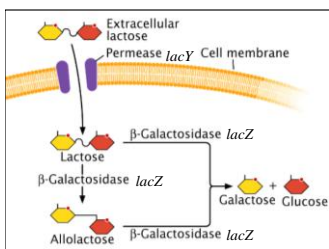
9.9

- Glucose always used first
 - Catabolite repression
 - Catabolite activator protein (CAP)



9.9 lac Operon

- Operon
- *E.coli* (negative inducible)



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